

**EFFECTIVENESS OF TRAINING PROGRAMME ON
KNOWLEDGE AND PRACTICE REGARDING
SELECTED FIRST AID MEASURES AMONG
NON MEDICAL PROFESSIONAL
STUDENTS**



Dissertation Submitted To

**THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY
CHENNAI**

IN PARTIAL FULFILMENT OF REQUIREMENT FOR THE AWARD OF
DEGREE OF

**MASTER OF SCIENCE IN NURSING
APRIL 2014.**

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PROGRAMME ON KNOWLEDGE AND PRACTICE
REGARDING SELECTED FIRST AID MEASURES
AMONG NON MEDICAL PROFESSIONAL
STUDENTS IN SELECTED INSTITUTIONS
AT CHENNAI 2013 – 2014.**

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TABLE OF CONTENTS

CHAPTER No	CONTENTS	PAGE No
I	INTRODUCTION	1-9
	Need for the study	4
	Statement of the problem	7
	Objectives	8
	Operational definitions	8
	Hypothesis	9
	Delimitations	9
II	REVIEW OF LITERATURE	10-27
	Review of related literature	11
	Conceptual framework	24
III	METHODOLOGY	28-35
	Research approach	28
	Research design	28
	Research variables	28
	Setting of the study	29
	Population	29
	Sample	29
	Sample size	29
	Sampling technique	29
	Criteria for sample selection	30
	Description of the instrument	30
	Validity	32
	Reliability	32
	Ethical consideration	32
	Pilot study	32
	Data collection procedure	33
	Data analysis	34
IV	DATA ANALYSIS AND INTERPRETATION	36-69
V	DISCUSSION	70-76
VI	SUMMARY, CONCLUSION, NURSING IMPLICATIONS, RECOMMENDATIONS AND LIMITATIONS	77-82
	REFERENCES	83-87
	APPENDICES	i-vii

LIST OF TABLES

TABLE No	TITLE	PAGE No
1	Frequency and percentage distribution of demographic variables of non medical professional students.	37
2	Frequency and percentage distribution of pre test level of knowledge regarding selected first aid measures among non medical professional students.	47
3	Frequency and percentage distribution of pre test level of practice regarding selected first aid measures among non medical professional students.	49
4	Frequency and percentage distribution of post test level of knowledge regarding selected first aid measures among non medical professional students.	51
5	Frequency and percentage distribution of post test level of practice regarding selected first aid measures among non medical professional students.	53
6	Comparison of frequency and percentage of pre test and post test level of knowledge regarding selected first aid measures among non medical professional students.	55
7	Comparison of frequency and percentage of pre test and post test level of practice regarding selected first aid measures among non medical professional students.	57
8	Comparison of mean and standard deviation of pre test and post test level of knowledge regarding selected first aid measures among non medical professional students.	59
9	Comparison of mean and standard deviation of pre test and post test level of practice regarding selected first aid measures among non medical professional students.	61
10	Correlation between post test level of knowledge and practice regarding selected first aid measures among non medical professional students.	63
11	Association of pre test level of knowledge regarding selected first aid measures with their demographic variables among non medical professional students.	64
12	Association of post test level of knowledge regarding selected first aid measures with their demographic variables among non medical professional students.	65
13	Association of pre test level of practice regarding selected first aid measures with their demographic variables among non medical professional students.	67
14	Association of post test level of practice regarding selected first aid measures with their demographic variables among non medical professional students.	68

LIST OF FIGURES

FIGURE No	TITLE	PAGE No
1	Conceptual framework.	27
2	Schematic representation of research methodology.	35
3	Percentage distribution of age among non medical professional students.	39
4	Percentage distribution of sex among non medical professional students.	40
5	Percentage distribution of various departments among non medical professional students.	41
6	Percentage distribution of place of residence among non medical professional students.	42
7	Percentage distribution of educational status among parents of non medical professional students.	43
8	Percentage distribution of history of any previous injury among non medical professional students.	44
9	Percentage distribution of health camp attended among non medical professional students.	45
10	Percentage distribution of duration of first aid camp attended among non medical professional students.	46
11	Percentage distribution of pre test level of knowledge regarding selected first aid measures among non medical professional students.	48
12	Percentage distribution of pre test level of practice regarding selected measures among non medical professional students.	50
13	Percentage distribution of post test level of knowledge regarding selected first aid measures among non medical professional students.	52
14	Percentage distribution of post test level of practice regarding selected first aid measures among non medical professional students.	54
15	Comparison of percentage distribution of pre test and post test level of knowledge regarding selected first aid measures among non medical professional students.	56
16	Comparison of percentage distribution of pre test and post test level of practice regarding selected first aid measures among non medical professional students.	58
17	Comparison of mean and standard deviation of pre test and post test level of knowledge regarding selected first aid measures among non medical professional students.	60
18	Comparison of mean and standard deviation of pre test and post test level of practice regarding selected first aid measures among non medical professional students.	62

LIST OF APPENDICES

APPENDIX No	TITLE	PAGE No
A	Instruments	i
B	Certificate of ethical clearance	ii
C	Certificate for content validity	iii
D	Permission letter	iv
E	Consent letter	v
F	Certificate for editing	vi
G	Instructional module	vii

ABSTRACT

ABSTRACT

Every individual knows the value of life but, there are certain situations in which it falls in danger and sometimes without appropriate steps that need to be taken and lives are lost. A drop of water is more valuable to a man who is thirsty, nearing to death than a tumbler full of water when he is dead. Yes, in most of the cases of injury if first aid is provided successfully, the dangers to life are reduced to less than 60%.

A study was conducted to assess the effectiveness of training programme on knowledge and practice regarding selected first aid measures among non medical professional students. The hypothesis formulated was there is a significant association between training programme and level of knowledge and practice regarding selected first aid measures among non medical professional students. The review of literature included studies which provide a strong foundation for the study including the basis for conceptual framework and formation of tool.

The research design used for this study was pre experimental one group pre test post test design. It was carried out with 30 samples those who fulfill the inclusion criteria. Purposive sampling technique was used to select the sample. A self administered tool was used to assess the pre test and post test level of knowledge and practice regarding selected first aid measures. Training programme was conducted for the duration of 30 to 45 minutes. The post test was assessed after fifth to seventh day by using same tool.

The analysis revealed that the pre test level of knowledge regarding selected first aid measures mean score was 18.07 with the standard deviation of 7.26 and the post test level of knowledge regarding selected first aid measures mean score was 36.13 with standard deviation of 14.52. The pre test level of practice regarding selected first aid measures mean score was 15.93 with standard deviation of 7.30 and post test level of practice regarding selected first aid measures mean score was 27.97 with standard deviation of 3.32. The paired 't' test value was 20.76 and 22.17 which showed very high significant at the level of $p < 0.001$. The karl pearson correlation coefficient value of $r = 0.54$ at the level of $p < 0.01$ which showed moderate correlation between post test level of knowledge and practice regarding selected first aid measures among non medical professional students. Hence it indicates the effectiveness of training programme regarding selected first aid measures among non medical professional students. So the research hypothesis was accepted for the study.

INTRODUCTION

CHAPTER I

INTRODUCTION

“Safety is a cheap and effective insurance policy”

Life of each and every individual is a gift from God. Living a healthy life is foremost important part of our life. This precious life can be affected by both external and internal factors. Adolescence period is the most joyful and remembrance phase of life. Every individual have to be very cautious about our health and the wellbeing. Injuries are most common problems faced by the adolescence. First help is the best help so first aid is the provision of initial care for an illness or injury.

An emergency can happen at any time or any place. An emergency is a situation demanding immediate action. The first critical step in any emergency depends on presence of someone who will take appropriate action. The goal of the first aid course is to train the person on basics of first aid that will help them to recognize and respond to any emergency appropriately. This response may help to save a life.

First aid is the immediate care given to a person who has been injured or suddenly become ill. It includes self help and home care, if medical assistance is not available or is delayed. It also includes well selected words of encouragement, evidence of willingness to help and promotion of confidence by demonstration of competence.

The person giving first aid, the first aider deals with the whole situation, the injured person and the injury or illness. First aider knows what to do as well as not to do during emergency situations and avoids errors that are frequently made by untrained persons through well meant but misguided efforts. First aider knows their first aid knowledge and skill can mean the difference between life and death

between temporary and permanent disability and between rapid recovery and long hospitalization.

First aid generally consists of a series of simple, potentially life saving techniques that an individual can be trained to perform with minimal equipment. It is very important to know what to do in case of an accident or emergency. First aid is the immediate help given to an injured or ill person before the doctor arrives.

First aid is so important especially now with all the strange infections that are going around. First aid is usually meant for minor cuts and scrapes or is in reference to the first response to any kind of medical emergency. Administering first aid quickly and accurately in a traumatic injury situation can make the difference between life and death.

Basic training in first aid skills should be taught in Schools, Colleges and in work places, as it is mandatory to our modern and stressful life. First aid knowledge also increases the social responsibility of the society and strengthen humanitarian values.

Injuries resulting from road traffic accident, drowning, poisoning, falls or burns, violence from assault, self inflicted violence or acts of war kill more than five million people worldwide annually and cause harm to millions more. The injuries account for 9% of global mortality and are a threat to health in every country of the world. For every death, it is estimated that there are dozens of hospitalizations, hundreds of emergency department visits and thousands of doctor's appointments. A large proportion of people ended up with the temporary or permanent disabilities.

Minor bleeding episodes are commonly seen among the college students. It is easy to treat and have no long term consequences. Major bleeding can be very dangerous and need to care immediately to prevent complications. Accidental cuts, lacerations or puncture wounds from sharp objects could cause extensive bleeding. Extensive bleeding can cause a drop in the blood pressure and decreased organ

blood flow, which could lead to shock. We have to check a person who is bleeding for other related injuries such as head injury, fracture, cuts and falls from height.

Drowning is a process resulting in primary respiratory impairment from submersion in a liquid medium. Drowning is a liquid air interface present at the entrance to the victim's airway, which prevents the individual from breathing oxygen. Outcome may include delayed morbidity, delayed or rapid death or life without morbidity. Immediate threats include effects on the central nervous system and cardiovascular systems. Thus, the most critical actions in the immediate management of drowning victims include prompt correction of hypoxemia and acidosis.

Drowning is a leading cause of injury related to death in children. In 2000, more than 1400 United States children younger than 20 years old were drowned. In India it is estimated that at least 1 to 4 children suffer a serious nonfatal submersion event, many of which leaves children with permanent disabilities reported by the World Health Organization (WHO) in 2006.

A fracture is a medical condition in which there is a break in the continuity of the bone. A bone fracture can be the result of high force impact or stress. As the adolescence period is a very active phase always trying to explore new and there are many chances for hurting themselves. The most common orthopedic problems about 6.8 million come to medical attention each year in the United States. The average citizen in a developed country can expect to sustain two fractures over the course of their lifetime.

An electrical injury occurs upon contact of a human body part with any source of electricity that causes a sufficient current through the skin, muscles or hair. A high voltage current passing through the body may make it impossible for a shock victim to let go of an energized object. Still larger currents can cause fibrillation of the heart and damage to tissues. Death caused by an electric shock is called electrocution.

Shock is the condition of being not conscious in a mental state that involves complete or near complete lack of responsiveness to people and other environmental stimuli. Fainting is due to a drop in blood pressure with drugs that depress the activity of the central nervous system. e.g. alcohol and other hypnotic or sedative drugs, severe fatigue and other causes.

The process of providing first aid measures and emergency care knowledge to the students is essential as they are the building blocks of the country.

NEED FOR THE STUDY

“If safety is a joke, then death is the punch line.”

- Paul Laforest

First aid training is the value of both preventing, treating sudden illness and accidental injury and in caring for large number of persons caught in a natural disaster. Injuries are a major but neglected public health challenge that requires concerted efforts for effective and sustainable prevention. All the system which people have to deal every day, road traffic systems are the most complex and the most dangerous. According to the worldwide statistics in 2004 stated that an estimated 1.2 million people were killed in road crashes each year and as many as 50 million peoples were injured. Projections indicate that these figures will increase by about 65% over the next 20 years unless there is new commitment to prevention. The report based on 2006 and 2007 statistics collected from 178 participating countries, said globally over 1.2 million people die in road accidents every year and 20-25million people suffer from non fatal injuries.

Safety and security are of paramount importance in a college environment. College life is a remarkable period in an adolescent's life where each of them faces a whole world. They focus on their study including their examinations as well as many extracurricular activities include music, singing, dancing and sports. In the field of sports, many adolescent children involve themselves in relays, basketball,

football, cricket, short put, javelin and also in other competitive games. Thus many of these children are prone to get injuries from these.

According to World health Organization statistical report in 2012, about 1.3 million people die each year as a result of road traffic crashes. Injuries are the leading cause of death among young people aged 15-29 years. Over 90% of the world fatalities on the roads occur in low income and middle income countries, even though these countries have less than half of the world's vehicles. Nearly half 46% of those dying on the world's roads are vulnerable road users, pedestrians, cyclists and motorcyclists. Without action, road traffic crashes are predicated to result in the deaths of around 1.9 million people annually by 2020. Only 15% of countries have comprehensive laws relating to five key risk factors like speeding, drinking, driving, the use of motorcycle helmets, seat belts and child restraints.

India is a home to almost 19% of the world's children. More than one third of the country's population and around 480 million (54% of the population) of children is below the age of 25 years. Children are the future of any nation and the healthy existence of children is essential to build up a challenging nation. India is the home to nearly 500 million young people. Among those young people 37% are children less than 15 years.

Trauma is a leading cause of death in most of the countries for those under the age of 45 and the fifth leading cause of death in all age groups globally. Fracture accounts for a higher percentage of traumatic injury. In India, the most common type of fracture is hip fracture. At present, India hobbles to second place in hip fracture all around world with 4.4 lakhs people falling every year.

In Bangalore about 99 reported accidental child death occurring every year and it is 3.9% of the total accidental deaths in the city. In 2007 all India accidental death rate was 30% whereas in Karnataka it is 39%. Unnatural accident rate in India was 36.3% whereas in Karnataka it is 43.2%. The unnatural accidents include road and rail accidents, poisoning, drowning, fire, falls, electrocution etc.

One year data from Bangalore shows that 209 children below the age of 18 years died and 5,505 children brought to the hospital with injury. Majority of the children belonged to average socio economic house hold and were studying in schools. Nearly one fourth of the total death in children was due to road traffic accidents. These were followed by burns with 17% and falls with 13%. Drowning and poisoning accounts for 6% and 5% respectively. It is estimated that Bangalore witnesses an average of nearly 10,000 hospitalizations every year. Road traffic accidents were the leading cause of injury with 40%, Falls are the second cause with 19% of injuries, Animal bites with 11%, Poisoning with 10%, Burns with 9% and assault accounts with 6% respectively.

The mortality rate in India due to road traffic accident and bleeding was about 1,20,000 in 2005. Deaths due to road accidents in 2009 were reported to be 126,896 and in 2010 it is increased to 133,938 which is about 5.5% over and above the previous year deaths. Tamil Nadu have accounted for 11.5% respectively of total Road accident deaths and injuries.

Drowning is one of the most serious causes of death among adolescence. The incidence shows from 2005-2009. There was an average of 3,533 fatal non boating related drowning annually in the United States, about ten deaths per day. An additional 347 people died each year from drowning in boating related incidents. About one in five people who die from drowning are children aged 14 and younger. For every child who dies from drowning, another five receive emergency department care for nonfatal submersion injuries. These nonfatal drowning injuries can cause severe brain damage that may result in long term disabilities such as memory problems, learning disabilities and permanent loss of basic functioning. People who die from drowning are mostly male.

According to the American Journal of Sports Medicine report in 2012, stated that approximately 10 percent of all college students had sports related injures and can severely impact on them physically, emotionally and financially so the knowledge regarding the fracture prevention among the college students is essential and should emphasized on the need for fracture prevention programmes.

Each year in the United States about 3-15% of mortality rate was due to electrical injuries. The real incident which give us awareness regarding the importance of first aid management in electrical injuries. A 22 years old male received a fatal shock as he stepped out of a caravan and made simultaneous contact with the door frame of the caravan and the ground. A damaged power cord on a power board caused the wet floor of the caravan and all conductive surfaces of the caravan to become live. An 18 years old female was walking home from a party and walked into a fallen public lighting switch wire. The wire conductor was live and the resulting injuries were fatal.

During the conversation with non medical professional students, the investigator has found that the students have inadequate knowledge regarding the first aid measures. So the investigator decided to conduct the study to assess the effectiveness of training programme on knowledge and practice regarding the selected first aid measures among non medical professionals.

The nurse being one among the member of the healthcare team can act as a facilitator and support in developing the potential abilities of the students. Hence, the investigator felt that there is a need of preparing a training programme regarding the selected first aid measures which will help them to have gain adequate knowledge, self confidence and motivation regarding selected first aid measures.

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of training programme on knowledge and practice regarding selected first aid measures among non medical professional students in selected institutions at Chennai.

OBJECTIVES

1. To assess the pre test level of knowledge and practice regarding selected first aid measures among non medical professional students.
2. To assess the post test level of knowledge and practice regarding selected first aid measures among non medical professional students.
3. To assess the effectiveness of training programme on knowledge and practice regarding selected first aid measures among non medical professional students.
4. To correlate the post test level of knowledge and practice regarding selected first aid measures among non medical professional students.
5. To associate the pre test and post test level of knowledge and practice regarding selected first aid measures among non medical professional students with their selected demographic variables.

OPERATIONAL DEFINITIONS

Effectiveness: Refers to producing a desirable result of training programme on selected first aid measures among non medical professional students.

Training programme: Refers to a planned programme for knowledge and practice regarding selected first aid measures among non medical professional students by using poster, hand out, pamphlets and demonstration.

Knowledge: Refers to known information regarding the selected first aid measures among non medical professional students.

Practice: Refers to the immediate measures during the time of bleeding, drowning, fracture, electrical injuries and shock to be carried out by non medical professional students.

First aid measures: Refers to an immediate and temporary care given to the victims during bleeding, drowning, electrical injury, fracture and shock.

Non medical professional students: Refers to those students who are studying other than the medical course, non Para medical course such as engineering, art and science etc.

HYPOTHESIS

There is a significant association between training programme and level of knowledge and practice regarding selected first aid measures among non medical professional students.

DELIMITATIONS

- The sample size was delimited to 30 students.
- The data collection period was delimited to 4 weeks.
- The study was delimited to only one institution.

*REVIEW OF
LITERATURE*

CHAPTER II

REVIEW OF LITERATURE

The review of literature is an essential aspect of the scientific research. It is a systemic identification, location, scrutiny and summary of written material. That contains information related to the problem under study. The investigator gained insight in selected problem from an extensive review.

This chapter is designed to include the review of literature and the conceptual frame work adopted for the study.

PART I- REVIEW OF RELATED LITERATURE

First aid is the assessment and interventions that can be performed by a bystander or the victim themselves with minimal or no medical equipment.

- Markenson, et al., (2010)

The purpose of first aid is to minimize injury and disability. In serious cases, first aid is necessary to sustain life. The first aid measures provide recommendations on how to minimize the effects of accidental injuries. The recommendations describe measures that trained first aid providers are able to save the life of victim efficiently with minimum efforts.

This chapter is organized systematically and classified in the following manner

- Literature related to general first aid measures.
- Literature related to knowledge and practice regarding selected first aid measures.
- Literature related to training programme on first aid measures.

PART II - CONCEPTUAL FRAMEWORK

PART I

REVIEW OF RELATED LITERATURE

Every day, there is the potential for an injury, illness or sudden health emergency to occur in the places where we live, work, learn and play. While many of these situations require no more than a band aid or others may be life threatening conditions.

First aid is the skill applied on the occurrence of injury or sudden illness using material available at that time until the arrival of proper assistance. The first aiders should know their duties and responsibilities while taking care of victims such as to preserve life, prevent condition from worsening and promote recovery.

In order to provide a effective first aid measures during emergency situations the following qualities should be present inside the well trained first aiders like they should keep up to date with knowledge and practical skill. Some evidence suggested that the first aid training programme must be implemented in school and colleges to minimize the sufferings.

Literature related to General first aid measures

Eldosoky. R. S., et al., (2012) has reviewed a cross sectional study to evaluate knowledge, attitude and practice about first aid on home related injuries among children of the rural mother at Egypt. This study was conducted among 1450 rural mothers of the children aged up to 12 years. The interview questionnaire method was used regarding certain aspects like home injuries, cut wound, fall and fracture, burns, poisoning and foreign body aspiration. This study result showed that the mothers with younger age, higher education and high socio economic status were having more knowledge regarding first aid.

Li. F., et al., (2012) has conducted a study to assess the pediatric first aid knowledge and attitude among staff in the preschool of Shanghai, China. This study was carried out among 1067 staffs. A stratified random sampling method was used to select the sample. The researcher used a structured questionnaire regarding injuries to the eye, inhaled poison and choking. This study results showed that the first aid knowledge among preschool staffs was low. The investigator has recommended that there should be urgent need to educate staff member regarding first aid practice.

Tyflids. A., et al., (2012) has conducted a study to assess the epidemiological records of bone fracture sustained by student athletes of the Greek athletic facilities classes for the duration of a 1 year period. This study was conducted among 7455 male and 4921 female student athletes from the duration of September 2006 until May 2007. The fracture information was gathered by the Physical Education Teachers of the athletic facilities classes with the cooperation of orthopaedic doctors and the results were analysed with the Chi square non parametric test. This study results showed that the total 129 fractures were recorded over period of 1 year among students and 67.4% of male student athletics had sustains more fracture than 32.6% of female student athletics. The highest rate of fractures occurred in soccer and basketball players. Most injuries occurred in male student athletes who were residence of the urban region. The researcher concluded that the Overall fractures of the wrist, metacarpal bones fingers, and medial lateral malleollus were the most common injuries observed among student athletics.

Patrick. L., et al., (2009) has conducted a retrospective analysis of childhood drowning accident a total of 44 children suffering a drowning accident within the 48hrs were treated during the period of 1994 through 2008 at children centre.

A structured questionnaire was used. The clinical results and the outcome of the cases were investigated. The results found that risk of drowning was highest for boys aged 1 to 3 years. 6 patients died within 24 hours, 6 patients the course suffered with organ failure or brain death and 5 retained with neurological damages. This study concluded that the basic life support at the scene of the accident has highest

impact on the outcome. Training of parents and supervisors in prevention and provision of first aid after drowning can minimize the complications associated with them.

Jiang. Y. B., et al., (2008) has conducted a study to assess the influence of elective course of emergency treatment for medical students on the cultivation of first aid knowledge and skills of cardiopulmonary resuscitation. The randomized sampling technique was used to select the data, total of 60 students has participated and divided into experimental and control group with 30 students in each group. All of the students have received a test on first aid knowledge and cardiopulmonary resuscitation skill. This study result showed that in regard with a theoretical exam score, the score of observation group were significantly higher than that in the contrast group but in regard with resuscitation maneuvers, the observation group being obviously poorer than contrast group. The researcher recommended that an elective course of emergency medicine should be included as a required course in medical college.

Uskun. E., et al., (2008) done a retrospective study on first aid measures among 939 individuals at the scene of an accident. The first aid measures were provided by 43% of emergency medical technicians, 22% of physicians and 20% of untrained persons. This study results showed that 10% of victims died at the site of the accidents, out of 245 hospitalized individuals, 15% had suffered shock, 9% were admitted for aspiration and 2% had died from excessive blood loss and fracture. The researcher concluded that the first aid measures were unsatisfactory and there is a need to increase the training for emergency medical technicians and the availability of physicians to master the out lined complications.

Gessel. M. L., et al., (2007) has conducted a descriptive study to investigate the epidemiology of concussions in nationally representative samples of high school and college athletes and to compare the rates of concussion among them. This study was carried out among 100 high school children and 180 college students. The data was gathered from the high school reporting information online and the national collegiate athletic association injury surveillance system and were analyzed to

calculate rates, describe patterns and evaluate potential risk factors for sport related concussion. This study results showed that the 8.9% of all high school athletic injuries and 5.8% of all collegiate athletic injuries are concussion injuries in nature. The researcher concluded that the sport related injury surveillance systems can provide scientific data to drive targeted injury prevention projects.

Feldmen, et al., (2004) has conducted a prospective study regarding incidence, types, related factors and initial management of school injuries. The authors found that annual incidence rate of 5.4 injuries occurred out of 100 children, which appear to be under estimate of the actual rate of all injury events, 28.7% resulted in serious injuries. This study result showed that injuries were significantly more frequent in the elementary as opposed to the secondary school and boys were injured more significantly more often than girls. Most of the children with either serious or minor injuries were sent to the school office or returned to the class room. The researcher concluded that the present level of first aid training among school personal is adequate.

Grenfell. S, (2003) has conducted a study on childhood drowning and traditional rescue measures to examine the verbal autopsy data on child hood drowning. The researcher has analyzed the data on mortality rate of children under 5 years by drowning for the duration of 10 years. This study reported that 489 deaths, out of these 57% was aged 1 to 2 years and had a drowning rate of 521 per 1 lakh children. The findings suggest that community based resuscitation and emergency first aid measures are needed to improve recovery of drowned children.

Brijar, et al., (2001) in their article in United States explained that the morbidity of sports and recreational injuries in adolescents and found that sports accounted for 36% of injuries from all causes and 33% of all the serious injuries episodes. The rate and seriousness of injuries increased as children got elder. 60% of Sprain followed by 48% of fracture and dislocation are the common injuries among boys. Many of these injuries are associated with bicycles, fall from play ground equipments and skateboard.

Compbell. N. R., et al., (2001) has conducted an interventional study to assess the evaluation of a first aid and home safety programme for Hispanic migrant adolescents. A randomized sampling technique was used among 660 Hispanic adolescent age varying from 11 years to 16 years. These adolescent actively participated in a programme entitled sembrando salud (sowing the seed of health). The intervention consisted of conditions such as first aid and home safety training, tobacco and alcohol prevention. The participants were also assessed at immediate post intervention and then 1 year follows up. This study result showed that participants were better able to identify items to include in a first aid kit and how to respond in an emergency situation. The researcher concluded that sembrando salud was successful at achieving and maintaining change in confidence and knowledge of first aid and emergency response skill over a year long period.

Snowdon. A. W., et al., (2000) has conducted a study on the initial management of pelvic bone fracture. The researcher has analyzed that the mortality rate of the pelvic bone fracture and further injury is high, the uncontrolled bleeding and septic complications are the main causes of death. This study suggested that at the scene of the accident, for pre hospital immobilization and transportation a bean bag should be used as an initial care, they analyzed clinical course outcome of 132 patients with pelvic bone fracture and injuries from 1972 to 1990. This study results showed that the mortality rate dropped from 66% to 34%. The researcher recommended that the better primary and initial treatment measures can decrease the number of complications of pelvic bone fracture.

Literature related to Knowledge and practice regarding selected first aid measures

Delavar. M. A., et al., (2012) has conducted a cross sectional study to assess the knowledge, attitude and practices of relief workers posted in rescue and relief bases of the Red Crescent society at Iran. This study was conducted among 219 relief workers gathered from a different 13 cities. The cluster random sampling was used to select the data and used a pre test questionnaires to assess the knowledge and attitude. This study result shows that the 83% of relief workers knew how to

correctly perform a cardiopulmonary resuscitation while 94% of relief workers did not know how to perform cardiopulmonary resuscitation. The researcher concluded that the relief workers demonstrated moderate level of knowledge, attitude and practice towards the first aid.

Deepak. M. & sabitha. N. (2012) has conducted a descriptive study to assess the knowledge on first aid measures among self help group members at Mangalore. This study was carried out among 100 samples by using purposive sampling techniques. The researcher used a structured questionnaire to assess the knowledge regarding first aid practice for the duration between 2nd October to 13th November. This study result showed that majority of sample 62% had good knowledge and 38% had average knowledge about the first aid practice.

Abbas. A., et al., (2011) has conducted a comparative study to assess the level of knowledge regarding cardiopulmonary resuscitation, recovery position, asthma and bleeding among medical students trained in first aid and those with no training. This study was conducted among 250 medical students. Among them 125 students were trained and 125 students were untrained. A convenient sampling technique was used to select the students. A pre test self administered questionnaire was used for data collection. The questionnaire covered all the major topics of first aid and basic life support. This study result showed that the trained students has significantly better results than the untrained students regarding cardiopulmonary resuscitation, recovery position, asthma and bleeding.

Njogu & paul. M. (2011) has conducted a retrospective study to assess the knowledge regarding the management of electrical burn injuries among patients at Kenyatta national hospital. This study was carried out among 120 patients who consecutively presented with electrical burn injuries between January 2005 to December 2009. The researcher used a standardized questionnaire regarding the first aid and management during burns. The researcher concluded that the patients have low level of knowledge regarding the first aid management for burns.

Nyambak & Kevin. O. (2011) has conducted a descriptive cross sectional study to assess a knowledge, attitude and practice in first aid management of epistaxis by accident and emergency among clinical staff at Kenyatta. This study was conducted among 70 clinical staff during the duration between 2 months by using a structured questionnaire regarding pinching the nose, nasal packing and sitting leaning forward position. This study concluded that clinical staffs have inadequate knowledge on the standard first aid measures of epistaxis.

Khan. A., et al., (2010) has conducted a study to assess the knowledge, attitude and practice of the first aid measures among undergraduate students of Karachi. This study was carried out at various 6 colleges and out of them 3 was from medical college and 3 were from non medical college. The researcher used an interview method to select the students. The total of 446 students was participated in this study. Among them 78 students has undergone formal first aid training. This study result shows that the students who received formal first aid training have scored better than those who were not trained. The researcher recommended that first aid training programme should be introduced at school and college level.

Batfer. M., et al., (2007) has conducted a study to evaluate the first aid knowledge and attitude of primary school teachers at Turkish. This study was conducted among 312 teachers. The data were obtained by using 30 questionnaires regarding the administration of first aid. These questionnaires help to identify the teachers and to determine their knowledge and attitudes about first aid. This study result found that as the age of the teacher's increases, appropriate first aid practice become more and more important. The researcher concluded that most of the teachers do not have correct knowledge and attitude about first aid.

Miller and Spicer (2007) has conducted a study was conducted to assess the knowledge and practices of urban and rural high school children regarding minor injuries. The study was conducted among 112 urban and 110 rural high school students. A variety of local application for wound was described. Burnoil, Vaseline, talcum powder, mercuriome were told only by urban students while irrigation on wound was told by rural students. Washing of wound with water, use of turmeric,

ointment, dettol, spirit, sucking were told by urban students, while more of rural students told about use of mustard oil and other oils. Need of tetanus toxoid and immediate washing of wound was told more by urban students. Need for relevant health education was emphasized among the rural students.

Al khamees. N., et al., (2006) has conducted a study to assess the first aid knowledge and attitude among college students in Kuwait University. This study was conducted among 562 students from both science colleges and literary colleges through randomized sampling technique. A structured questionnaire including demographic data, 20 questions testing knowledge and 20 exploring attitudes was used. The score was interpreted as right answer score one and wrong answer score 0 for knowledge. This study result shows that the female student from Science College has significantly scored higher knowledge scores than male students. The researcher concluded that the more training and coursework in first aid at Kuwait University appears to be warranted with males and those in literary colleges especially to be targeted.

Parnell. M., et al., (2006) has reviewed a study to assess the knowledge and attitude towards resuscitation in Newzealand high school students. This study was conducted among 494 students with the age group of 18 to 20 years. A questionnaires method was used to assess both knowledge and attitude regarding resuscitation. This study results shows that the students has shown poor theoretical knowledge regardless of female and male students. This study finding suggested that although most high school students are willing and motivated to learn Cardio pulmonary resuscitation, a smaller percentage of students had a negative attitude towards Cardio pulmonary resuscitation that would act as a barrier to future learning or performance of resuscitation. The researcher recommended that more cardiopulmonary resuscitation training to high school should be introduced.

Olympia. R. P., et al., (2005) has conducted a study to assess the knowledge and attitude about shock among teachers on primary schools. This study surveyed the responses of 113 teachers from five primary schools on this topic. The results found that most of the teachers have knowledge deficits, especially regarding the

prevalence of epilepsy, the future of children with this disorder and Electroencephalograph as an aid to diagnosis. In addition, misconceptions regarding first aid for epilepsy were also common. This study concluded that more than two third of the teachers believed that children with epilepsy have academic problems more often, although about half of the respondents were in favour of normal schools for such children. Only about one fifth of the teachers were confident in dealing with an epileptic child.

Engeland, et al., (2002) has conducted a study on implementation of training of first aid to junior high students. The researchers measured the implementation of the program by teachers and the attitudes and knowledge of their students. This study result discovered that students whose teachers implemented the program enthusiastically had better attitudes toward first aid implementation and the students were gain more knowledgeable in first aid. The researcher concluded that the students also demonstrated higher self efficacy scores, a higher degree of confidence that they could be effective in terms of their skills.

Gagliardi. M., et al., (2002) has conducted a study to assess the knowledge, attitude and practice of shock among school teachers by using simple self administered questionnaires to 360 school teachers. The questionnaire contained 14 questions relating to epilepsy awareness, attitudes and first aid measures of seizures. The results reveals that 38% of respondents had not heard about epilepsy, 46.6% believed that epilepsy is a chronic incurable disease and 15% of the respondents preferred to place all children with epilepsy in a special class room. Furthermore, half of the respondents who had experience with first aid management of seizures used improper and potentially harmful measures. The researcher concluded that beside the proper management of epilepsy, a general public education campaign has to conduct in future and correct the existing biases regarding epilepsy are necessary to improve the quality of life of children with epilepsy.

Taha. A. Z, (2000) has conducted a study to assess the knowledge and practice of workers working in small industries regarding preventive measures of occupational hazards at Al-Khobar. This study was carried out with 8 types of

various industries. The researcher used randomized sampling techniques among 33 workers. All selected workers were interviewed using a standard questionnaire. This study result shows that 9% of the worker had inadequate knowledge regarding preventive measures and majority of the workers were exposed to a occupational hazards with injuries and accidents.

Aly. S. A., et al., (1993) has conducted a study to assess the knowledge of epilepsy and attitudes towards the condition among school teacher. A semi structured questionnaire was administered among 260 teachers. The results found that almost all teachers had heard about epilepsy, some teacher thought epilepsy as hereditary and 56% teachers believed epilepsy could be cured. The majority of teachers were interrupted in training first aid procedure. However, their knowledge of the clinical characteristics and first aid for a person during a seizure was unsatisfactory. The researcher recommended that the schools should offer some kind of information and knowledge regarding epilepsy to avoid the discrimination against pupils with epilepsy.

Literature related to Training programme on first aid measures

Maria. S. J., et al., (2013) has conducted a study to assess the effectiveness of lecture cum demonstration on first aid for selected minor injuries among accredited social health activities in selected area of Udupi district. The researcher used the evaluative approach with pre experimental one group pre test and post test design. This study result shows that the majority 63.3% the sample were serving as ASHA since 1 to 2 years, majority 83.3% of them had no previous experience of giving first aid and 100% of them had obtained information about first aid through various sources, majority 93.3% of them had not attended any training on first aid. This Study found that the middle most 50% post test knowledge scores were higher than the pre test knowledge score indicating the significant improvement in the knowledge on first aid and improvement in skills in first aid for open wounds, closed fracture of the arm, snake bite, dog bite and bee sting after teaching through lecture cum demonstration. The researcher concluded that the lecture cum

demonstration on first aid measures was effective in enhancing the knowledge and skills of ASHA.

Robertson. A., et al., (2010) has conducted a study to assess the attitude of high school students regarding the problem of first aid in emergency trauma. This study was conducted among 642 students from randomized selection from various high schools. A questionnaire with single choice answers was administered to them. This study results shows that about 80% respondents know the importance of first aid, only 21% undertakes the first aid procedure in emergency and 67% claimed that their skills are insufficient. This study concluded that the level of first aid training is very poor students do not learn practical skills and the training should start from primary school itself.

Georg. B., et al., (2009) has reviewed an experimental study to evaluate the effectiveness of a self structured teaching programme on the knowledge regarding first aid management and emergency care (FAM&EC) of burn patients among staff nurses in selected hospitals of Ludhiana. A non equivalent group pre test post test design was adopted by researcher. The in service education was conducted among staff nurses and test was conducted. There was highly significant difference between pre- and post test knowledge scores of experimental group among staff nurses regarding first aid management and emergency care of burn patients. Self structured teaching plan was found effective in increasing knowledge about first aid management for burn patients. This study result showed a highly statistical significant association between the knowledge scores of staff nurses who attended in service education. The researcher recommended that similar studies can conduct in different setting and different target population such as general public or nursing students.

Prabhjot. S., et al., (2009) has conducted a study to determine the effectiveness of a television burn prevention campaign on knowledge regarding electrical burn prevention and first aid for burns in grade five Cambodian school children. The researcher has developed 34 questionnaires for a total of 420 students. Average age was 12 years and 55% were females. The result shows that the 74% of

children were routinely cared during electrical burn. Only 52% has Television at home but still 78% managed to watch Television for an average of 2 hours per day. 36% of students indicated they had received information of first aid. Only 7% knew to roll on the ground if their clothes caught fire and nearly 50% would pour water on a burning pot of oil. This study suggests that a television burn prevention campaign could be an effective method to improve their knowledge especially if it was endorsed by an authority figure.

Devan. P. J, (2008) has conducted a study to assess the effectiveness of structured teaching programme on knowledge, attitude and skill on first aid management among rural youth at Vellore. This study has conducted among two groups such as experimental and control group. A structured teaching programme was administered only to experimental group. This study result shows that there was a positive correlation between knowledge and attitude among experimental group but the control group had inadequate knowledge and moderate attitude on first aid management.

Quan. L., et al., (2003) has conducted a study regarding evaluation of structured teaching programme on accidental drowning of children. The study was carried out among parents from six countries. A questionnaire was administered to the sample. This study results show that the parents knowledge about how to give first aid for drowning is increased from 11% to 41%. Apart from this, mortality rate of infants dropped by 85% and in children aged 1 to 4 decreased by approximately 40% after one year. This study concluded that the structured teaching program to parents is a good tool to prevent accidental suffocation and drowning.

Engeland. A, (2002) has conducted a study to assess the effectiveness of training programme regarding knowledge and attitude on first aid, self efficacy and intended behavior in emergency situation in Norwegian junior high schools. The researcher used a quasi experimental design to evaluate the effects of training programme regarding knowledge and attitude on first aid, self efficacy and intended behavior in emergency situation. The programme comprised a text book, a video and a teacher's manual. Data were collected by pre and post test questionnaires to 82

randomly selected schools. A separate questionnaire filled in by the teachers showed a low degree of implementation of the program. When comparing those classes that really used the program with the control classes, significant differences were revealed in many of the variables.

Huang. M. C., et al., (2002) has conducted a study to evaluate the effects of educational interventions on parental practices for recurrent febrile convulsions. The researcher used the non equivalent comparison group design to evaluate the intervention effects among the 326 parents. The samples were voluntarily chosen either to receive a mailed pamphlet regarding protecting the convulsing child and placing the child on his or her side for 196 parents or to attend a 2 hour educational program regarding protecting the convulsing child and placing the child on his or her side for 130 parents. Five telephone interviews were conducted within the 24 months after the interventions. This study result shows that Parents has demonstrated significant improvements in the recommended practices, particularly in protecting the convulsing child and placing the child on his or her side. This study concluded that the educational program and mailed pamphlet made significant improvements in recommended parental practices.

Liu. C. C., et al., (2000) has conducted a study to assess the effectiveness of an educational program on knowledge and first aid measures among 129 parents with epileptic children. The parents were assigned randomly into experimental and control groups on the day they attended the program. All parents completed a pre test questionnaire 3 weeks before the meeting. The control group completed the identical questionnaire before the program, whereas the experimental group completed the same post test after the program. After educational programme on knowledge and first aid measures for epileptic children, the experimental group showed significant improvement in knowledge, attitude, concerns and anticipatory practice of epilepsy compared with the control group. This study result indicates that the parent's knowledge, attitudes, anxiety and inadequate first aid measures toward epilepsy can be effectively changed by an educational intervention program.

PART II

CONCEPTUAL FRAMEWORK

The conceptual framework for this study is based on Imogen King's goal attainment model (1971).

Conceptual models deal with concepts that are used as building blocks and provide a conceptual perspective regarding interrelated phenomena which are closely structured.

The central focus of Imogen King's framework is man as a dynamic human being whose perception of objects, persons and events influence his behavior, social interaction, and health. Imogene King's conceptual framework includes three interacting systems which each system having its own distinct group of concepts and characteristics. These systems include personal systems, interpersonal systems, and social systems.

The personal system refers to the individual. The concepts within the personal system and fundamental in understanding human beings are perception, self, body image, growth and development, time and space. Imogene King (1981) viewed perception as the most important variables because perception influences behavior. King summarized the connections among the concepts in the following statement. An individual's perception of self, body image, time and space influence the way he or she responds to persons, objects and events in his or her life. As individuals grow and develop through the life span, experience with changes in structure and function of their bodies over time influence their perception of self, interpersonal systems involve individuals interacting with one another. King refers to two individuals as small or large groups.

The theory is based on the concepts of the personal and interpersonal systems including interaction, perception, transition and action. A basic theory for conceptual framework, which is aimed to assess the effectiveness of training programme on knowledge and practice regarding selected first aid measures among

non medical professional students. This involves interaction between the researcher and the non medical professional students the seven major concepts are described as follows.

Perception

Perception is the person's representation of the reality. It influences all other behavior of a person and it is more subjective and unique to each person. The researcher perceives that the non medical professional students have lack of knowledge and practice on selected first aid measures and the non medical professional students perceives the need to gain knowledge and practice on selected first aid measures.

Judgment

The judgment is a decision made by the researcher and the non medical professional students. Here the researcher judges that the non medical professional students have lack of knowledge and practice regarding the selected first aid measures. So, the investigator planned to provide a training programme to enhance the knowledge and practice on selected first aid measures. The non medical professional students judge to utilize the training programme to enhance the knowledge and practice on selected first aid measures.

Action

This refers to the changes that have to be achieved. The researcher's action is to implement training programme in order to improve the non medical professional student's knowledge and practice on selected first aid measures and the students were ready to gain knowledge and practice on selected first aid measures.

Goal setting

Here the researcher plans to train about the selected first aid measures for bleeding, drowning, fracture, electrical injuries and shock for gaining adequate knowledge and practice among non medical professional students.

Reaction

Reaction means decision to act. In this study the researcher developed a tool such as self administered multiple choice questionnaires and check list to assess the existing level of knowledge and practice regarding selected first aid measures among non medical professional students.

Interaction

Interaction is a process of perception and communication between person and environment and between person and person, represented by verbal and nonverbal behaviors that are goal directed. Here the researcher gave a training programme like lecture cum demonstration to non medical professional students on selected first aid measures for conditions like bleeding, drowning, fracture, electrical injury and shock.

Transaction

The transaction is purposeful interaction that leads to goal attainment between the researcher and the non medical professional students. Here, the researcher assesses the effectiveness of training programme on knowledge and practice regarding selected first aid measures among non medical professional students by post test using self administered multiple choice questionnaires and check list.

Positive outcome is adequate knowledge and good practice regarding selected first aid measures which has to be reinforced further. Negative outcome is moderately adequate, inadequate knowledge, fair practice and poor practice regarding selected first aid measures which needs to be reassessed for further learning.

King's conceptual framework and theory of goal attainment provides a useful structure for the current researcher by using a training programme in educating regarding the selected first aid measures. King's theory provides direction for nursing practice by emphasizing the processes of communication, interaction, transaction and the use of critical thinking.

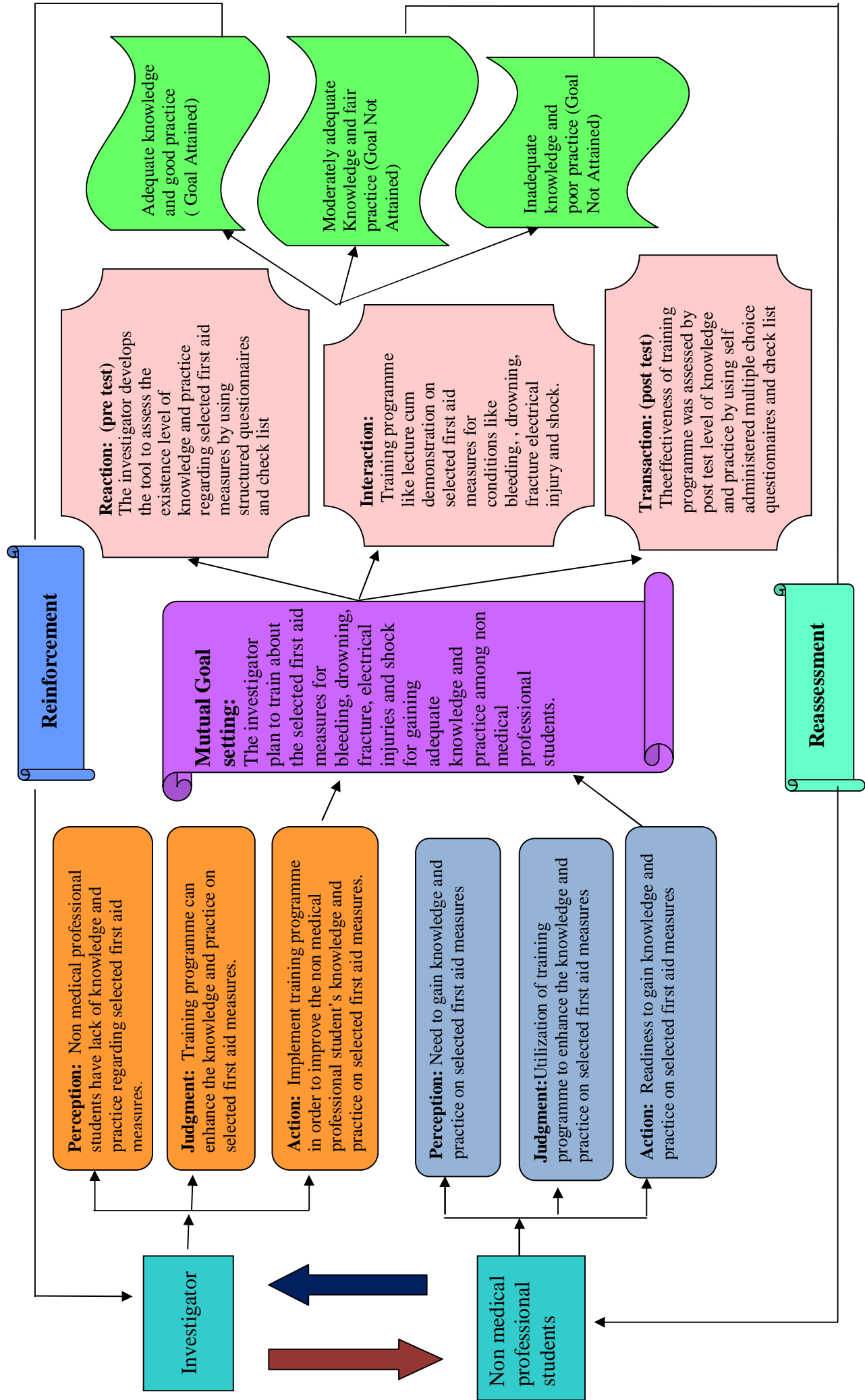


Fig 1: MODIFIED KING'S GOAL ATTIANMENT THEORY (1971).

METHODOLOGY

CHAPTER III

METHODOLOGY

The methodology is the back bone for any investigation. It is a guideline system for solving a problem with specific components such as phases, tasks, methods, techniques and tools. The successes of any research depend largely upon the suitability of the tools and the technique that the investigator follows to gather adequate data. This design was used to assess the effectiveness of training programme on knowledge and practice regarding selected first aid measures among non medical professional students in selected institutions at Chennai.

This chapter deals with a research design, setting of the study, population, sample, sample size, sampling techniques, criteria for sample selection, description of tools and data collection procedure.

RESEARCH APPORACH

Quantitative research approach was used for assessing the effectiveness of training programme on knowledge and practice regarding selected first aid measures among non medical professional students in selected institutions.

RESEARCH DESIGN

The design selected for study was pre experimental one group pre test post test design.

RESEARCH VARIABLES

Independent variables: It refers to a training programme regarding selected first aid measures.

Dependent variables: It refers to a knowledge and practice regarding selected first aid measures among non medical professional students.

SETTING OF THE STUDY

This study was conducted in Madha Engineering College at Chennai. Madha Engineering College is built on a Sprawling 30 acre site and this college is located at Kundrathur, Chennai-600 069. The College was founded in 1998 as a self financing institution. The Soosaiya Peter Educational trust has promoted this college with sole aim of spreading sound technical knowledge to the student community of Chennai and in general with the vision to impart quality technical education. This college caters to the needs of all societies around the globe. High Standards of discipline through their dedicated, involved and committed staff provide a ringing edge to the student community. The engineering department comprises of various courses like mechanical engineering, civil engineering, computer science, electronic and communication, electrical and electronic engineering. The first year classroom is located at B Block in 1st and 2nd floor.

POPULATION

The population consists of non medical professional students studying in Madha Engineering College at Chennai.

SAMPLE

The sample consists of non medical professional students those who fulfill the inclusion criteria.

SAMPLE SIZE

The study sample comprises of 30 non medical professional students in Madha Engineering College at Chennai.

SAMPLING TECHNIQUE

Purposive sampling technique was used to select the samples.

CRITERIA FOR SAMPLE SELECTION

Inclusion Criteria

- Students from Madha Engineering College have included.
- Students who were willing to participate in the study.
- Students who were studying in first year engineering.

Exclusion Criteria

- Students those who were studying in arts and science and teacher training.
- Students who were above 20 years.
- Students who were not willing to participate in the study.

DESCRIPTION OF THE INSTRUMENT

Extensive review of literature, discussion and guidance from experts enhance the development of tools. The tool consists of four parts:

Part I

It includes the demographic variable of non medical professional students which consists of age, sex, educational qualification of parents, department, place of residence, history of any previous injuries and health camp attended and duration of first aid camp.

Part II

It consists of 50 multiple choice questions to assess the knowledge of non medical professional students regarding selected first aid measures. It has 10 questions for each component such as bleeding, drowning, fracture, electrical injuries and shock.

The scoring was interpreted as follows

The correct response carries one mark and the wrong response carries zero mark.

Adequate knowledge	-	76-100%
Moderately adequate knowledge	-	51-75%
Inadequate knowledge	-	<50%

Part III

It consists of check list for practice about the selected first aid measures regarding bleeding, drowning, fracture, electrical injuries and shock.

There are 35 statements to assess the practice of non medical professional students regarding selected first aid measures. It has 7 statements for each component such as bleeding, drowning, fracture, electrical injuries and shock.

The scoring was interpreted as follows

It consist of five components, each component include seven statements. Presence of skill was marked as yes and it carries one marks similarly absence of skill was marked as no and it carries zero marks.

Good	-	76-100 %
Fair	-	51-75%
Poor	-	< 50%

Part IV

It consists of instructional module and demonstration of information regarding the selected first aid measures on bleeding, drowning, fracture, electrical injuries and shock among the first year engineering students.

VALIDITY

Validity of the tool was assessed using content validity. Content validity was determined by expert from nursing and medical field. They suggested certain modifications in the tool. After the modifications they agreed this tool for assessing effectiveness of training programme on knowledge and practice regarding selected first aid measures among non medical professional students.

RELIABILITY

The reliability of the tool was assessed by using test retest method, its correlation coefficients r values are 0.76 and 0.08. The correlation coefficient was high, so the tool was appropriate and used to assess the effectiveness of training programme on knowledge and practice regarding selected first aid measures among non medical professional students.

ETHICAL CONSIDERATION

The study was conducted after the approval of dissertation committee. Formal written permission was obtained from the Chairman of Madha group of Academic Institution and the principal of Madha Engineering College. The non medical professional students were clearly explained about the study purpose and procedures. The formal written consent was taken from the samples. The usual assurance of anonymity and confidentiality was obtained.

PILOT STUDY

The refined tool was used for pilot study to test the feasibility, appropriateness and practicability. The pilot study was conducted in Madha Engineering College at Chennai from the duration of 01.04.2013 to 06.04.2013. A formal permission was obtained from higher authorities and also from the students. The pilot study was carried out with 3 students who fulfilled the inclusion criteria. The samples were selected by purposive sampling technique.

The brief self introduction was given by the investigator and explained the purpose of the study to the students to gain their co operation. The tool was explained in detail to the participants. On the first day self administered questionnaires was distributed to the participants to assess the pre test level of knowledge and assess the pre test level of practice regarding selected first aid measures by using check list. On next day the lecture cum demonstration on selected first aid measures was performed to the students for duration of 30 to 45 minutes. The post test was conducted by using the same tool on the fifth day.

DATA COLLECTION PROCEDURE

A self administered multiple choice questionnaire was used to assess the level of knowledge and practice regarding selected first aid measures among non medical professional students. The permission was obtained from the Chairman of Madha group of Academic Institutions and the principal of Madha Engineering College, Chennai. The data was collected over a period of 4 weeks duration in the month of May from 06.05.2013 to 06.06.2013. The study was carried out among 30 first year engineering students who fulfilled the inclusion criteria. A written informed consent was obtained from each participant. Self introduction was followed by adequate explanation about the purpose of the study to ensure better cooperation.

Every day the investigator selected 3 to 5 first year engineering students by using purposive sampling technique. A self administered multiple choice questionnaire was distributed to the samples to assess their pre test level of the knowledge regarding selected first aid measures and the pre test level of practice regarding selected first aid measures was assessed by using check list. After conducting pre test, the training programme was given for first year engineering students by using various devices like hand out, posters, demonstration with manikin for 30 to 45 minutes. Then the investigator conducted the post test on fifth to seventh day by using same tool.

DATA ANALYSIS

The data was analyzed in term of the objectives of the study using both descriptive and inferential statistics. Demographic variables of non medical professional students were analyzed in terms of frequency percentage. Mean and standard deviation was used to compute pre test and post test level of knowledge and practice regarding selected first aid measures among non medical professional students. Paired 't' test was used to assess the effectiveness of training programme on selected first aid measures. Karl Pearson correlation coefficient was used to correlate between the post test level of knowledge and practice regarding selected first aid measures. Chi square test was used to associate the pre and post level of knowledge and practice regarding selected first aid measures among non medical professional students with their selected demographic variables.

**A STUDY TO ASSESS THE EFFECTIVENESS OF TRAINING PROGRAMME
ON KNOWLEDGE AND PRACTICE REGRADING SELECTED FIRST AID
MEASURES AMONG NON MEDICAL PROFESSIONAL STUDENTS
IN SELECTED INSTITUTION AT CHENNAI.**

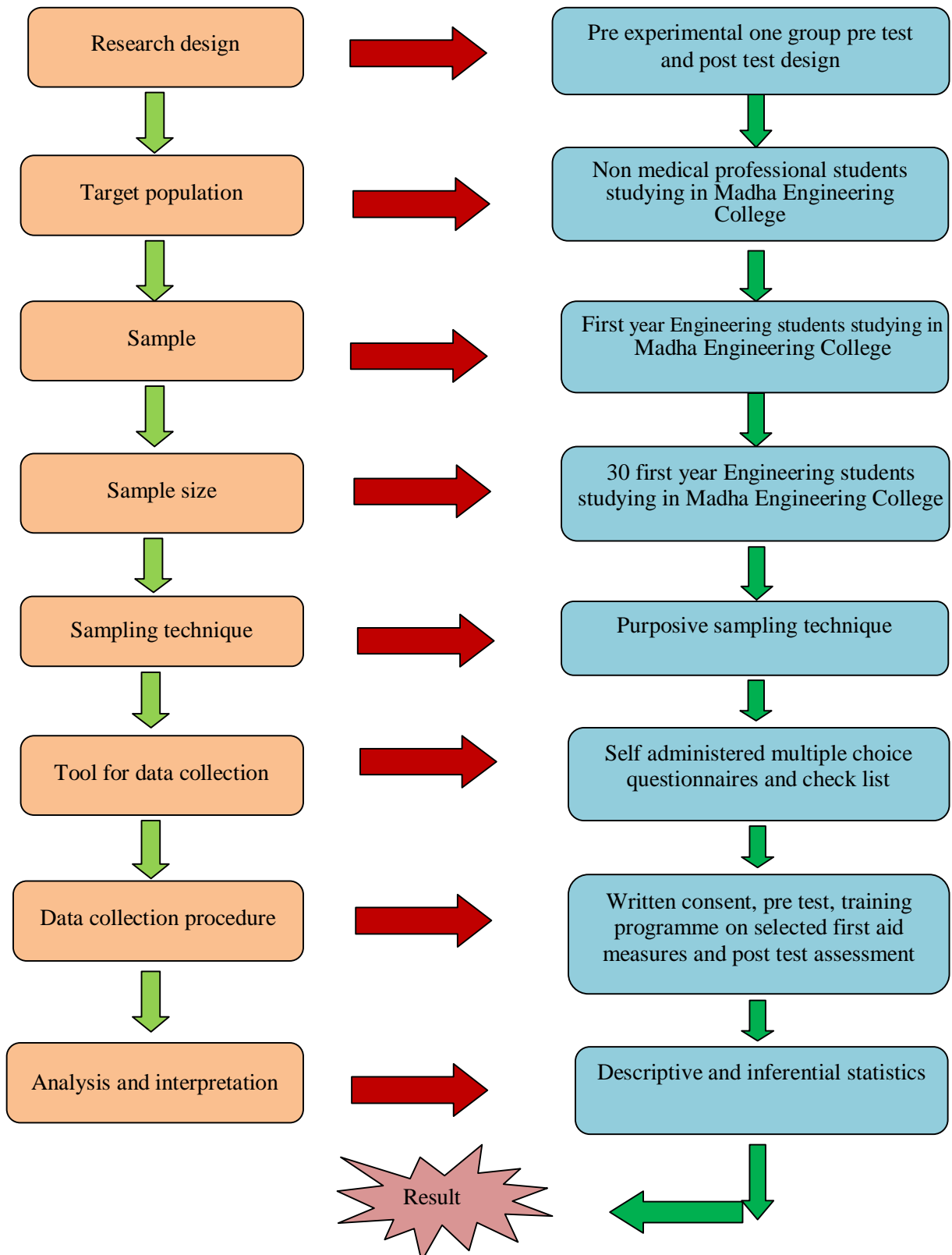


Fig. 2: Schematic representation of research methodology.

*DATA ANALYSIS
AND
INTERPRETATION*

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

Data analysis is the categorizing, ordering, manipulating and summarizing of data to reduce the intelligible and interpretable so that the research problem can be studied and tested including the relationship between variables (kerlinger 1976).

The findings are based on the descriptive and inferential statistical analyzed and presented under the following sections.

- Section A :** Frequency and percentage distribution of demographic variables of non medical professional students.
- Section B :** Frequency and percentage distribution of pre test level of knowledge and practice regarding selected first aid measures among non medical professional students.
- Section C :** Frequency and percentage distribution of post test level of knowledge and practice regarding selected first aid measures among non medical professional students.
- Section D :** Comparison of frequency and percentage of pre test and post test level of knowledge and practice regarding selected first aid measures among non medical professional students.
- Section E :** Comparison of mean and standard deviation of pre test and post test level of knowledge and practice regarding selected first aid measures among non medical professional students.
- Section F :** Correlation between post test level of knowledge and practice regarding selected first aid measures among non medical professional students.
- Section G :** Association of pre test and post test level of knowledge and practice regarding selected first aid measures among non medical professional students with their selected demographic variables.

SECTION - A

Table 1: Frequency and Percentage distribution of demographic variables of non medical professional students.

N=30

S. No	Demographic Variables	Frequency	Percentage
1	Age in years		
	17 -18	24	80.0
	19 - 20	6	20.0
2	Sex		
	Male	11	36.7
	Female	19	63.3
3	Department		
	Mechanical engineering	8	26.7
	Civil engineering	5	16.7
	Automobile engineering	4	13.3
	Computer engineering	13	43.3
4	Place of residence		
	Rural	16	53.3
	Urban	14	46.7
5	Educational status of parents		
	Illiterate	12	40.0
	Medical professional	1	3.3
	Non medical professional	17	56.7
6	History of any previous injury		
	Fracture	2	6.7
	Cut injury	2	6.7
	Head injury	1	3.3
	None of the above	25	83.3
7	Health camp attended		
	Yes	5	16.7
	No	25	83.3
8	Duration of first aid camp attended		
	Less than one week	5	16.7
	More than one week	0	0.0
	Not at all attended	25	83.3

Table 1 depicts the distribution of demographic variables of non medical professional students. With respect to age of non medical professional students, the majority 24 (80%) were in the age group of 17 to 18 years and 6 (20%) were in the age group of 19 to 20 years. With regard to the sex, the majority of the patients 19 (63.3%) were females and 11 (36.7%) were males. Regarding the various departments of the students, the majority of the students 13 (43.3%) were in computer engineering department, 8 (26.7%) were mechanical engineering department, 5 (16.7%) were civil engineering department and 4 (13.3%) were auto mobile engineering department. Considering the place of residence, the majority of students 16 (53.3%) were from rural area and 14 (46.7%) were from urban area.

With regard to their educational status of their parents, 17 (56.7%) parents were non medical professionals, 12 (40%) were illiterates, 1 (3.3%) were medical professional. With regard to the history of any previous injury, 25 (83.3%) students had no history of previous injury, 2 (6.7%) students had fracture, 2 (6.7%) students had cut injury and 1 (3.3%) had head injury.

In relation to health camp attended, 25 (83.3%) students has not participate in the health camp and 5 (16.7%) students has attended the health camp. With regard to the duration of first aid camp attended, 5 (16.7%) students have attended the camp less than one week and 25 (83.3%) students has not at all attended the first aid camp.

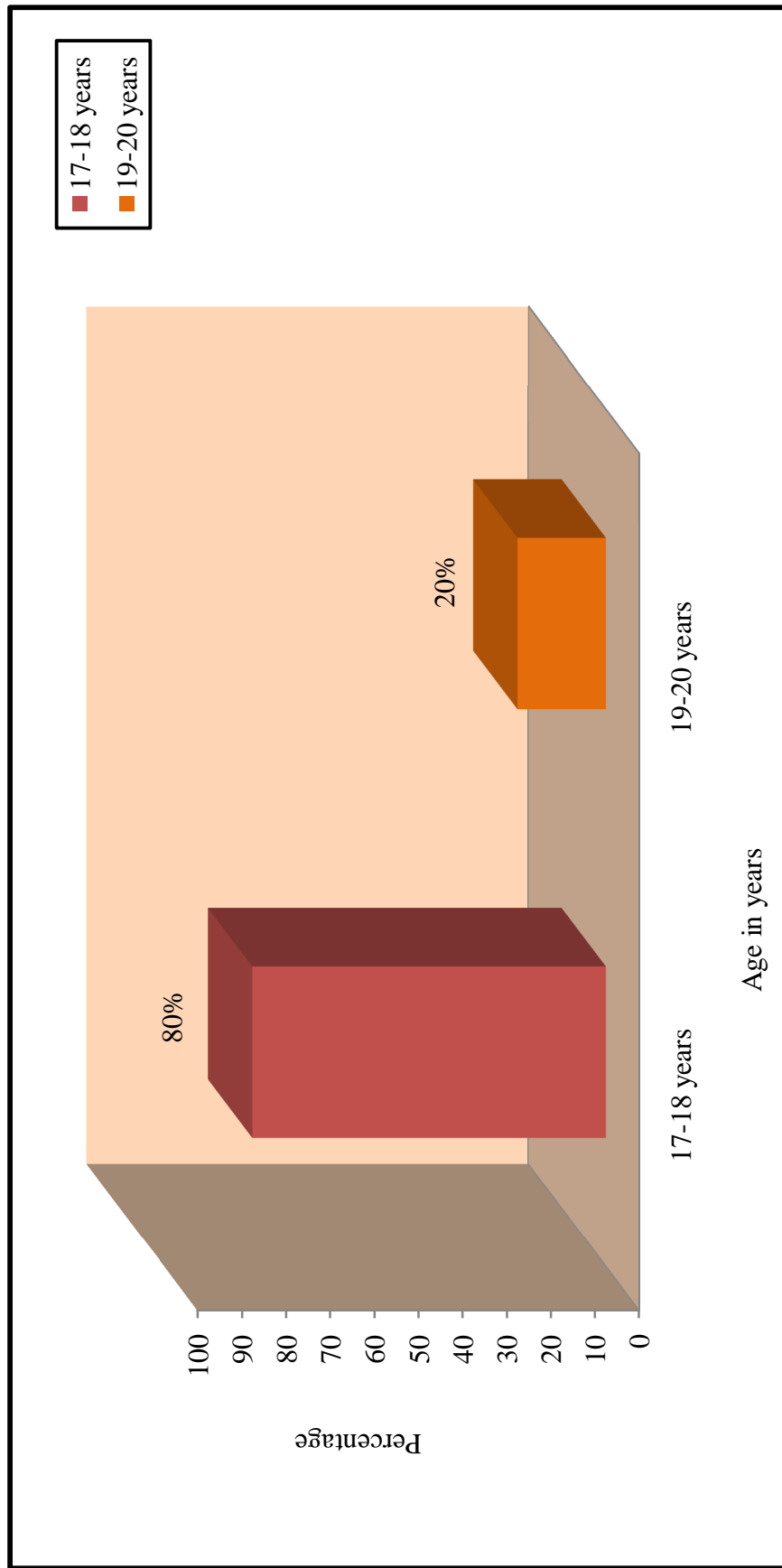


Fig. 3: Percentage distribution of age among non medical professional students.

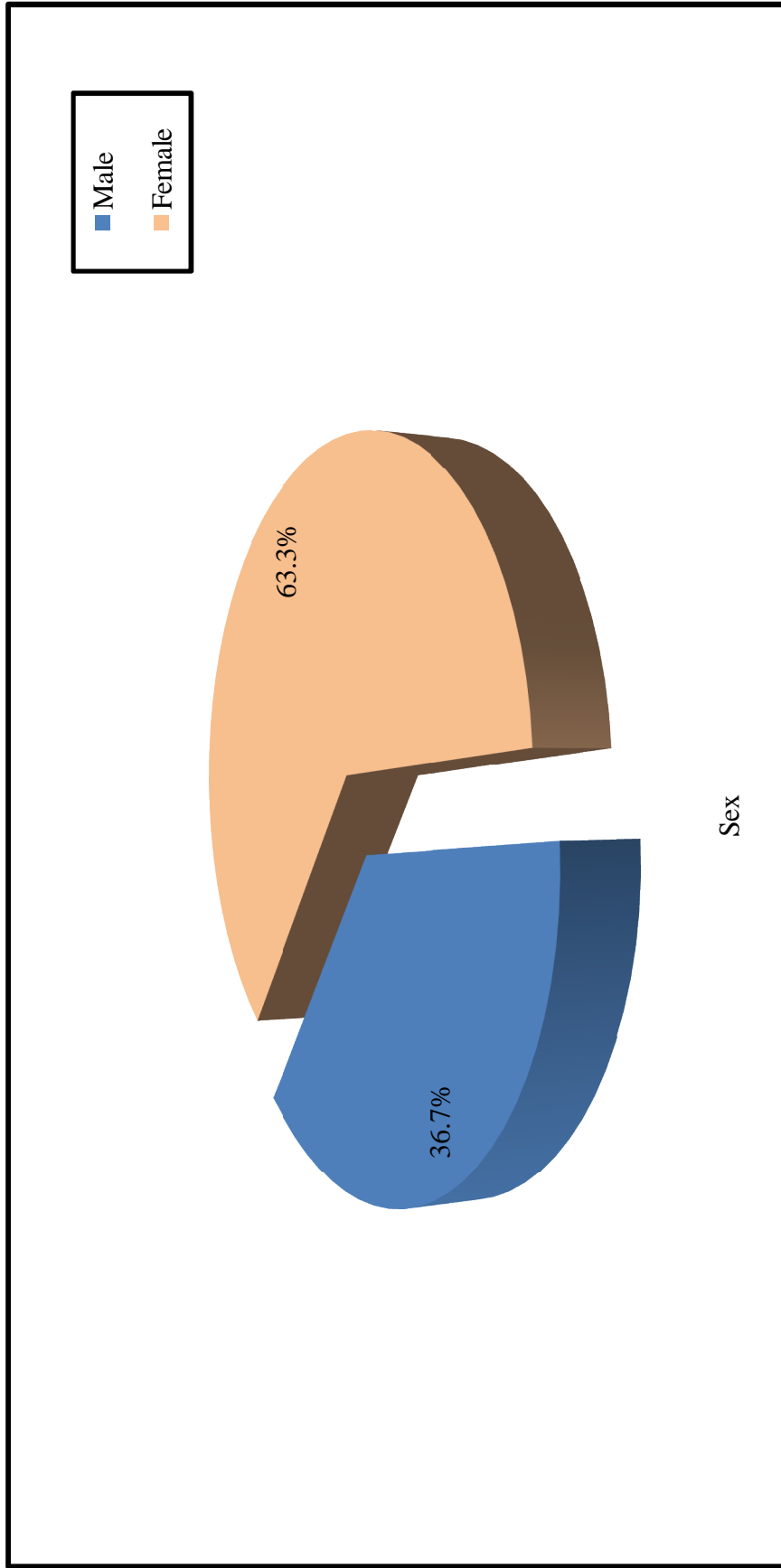


Fig. 4: Percentage distribution of sex among non medical professional students.

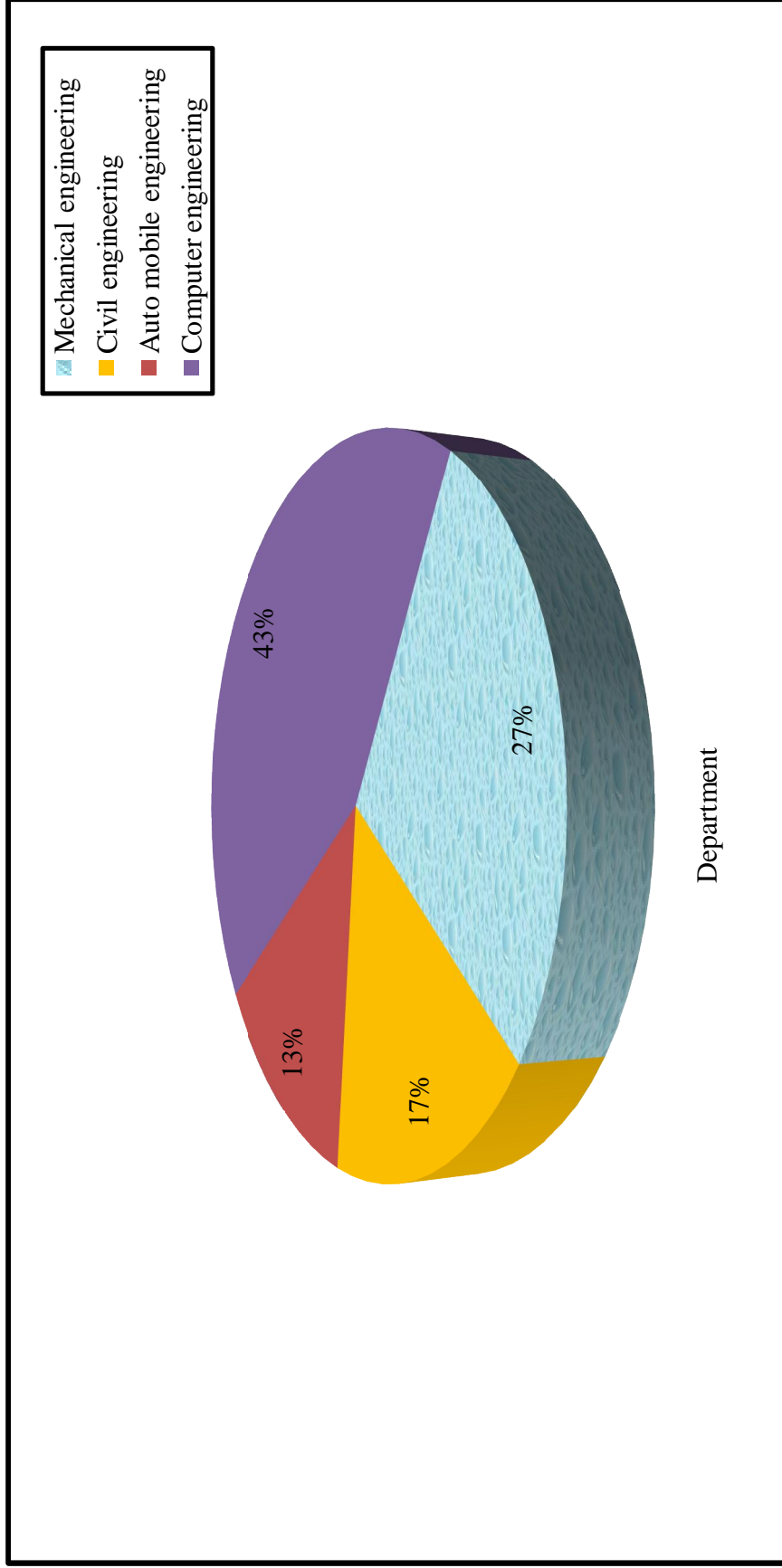


Fig. 5: Percentage distribution of various departments among non medical professional students.

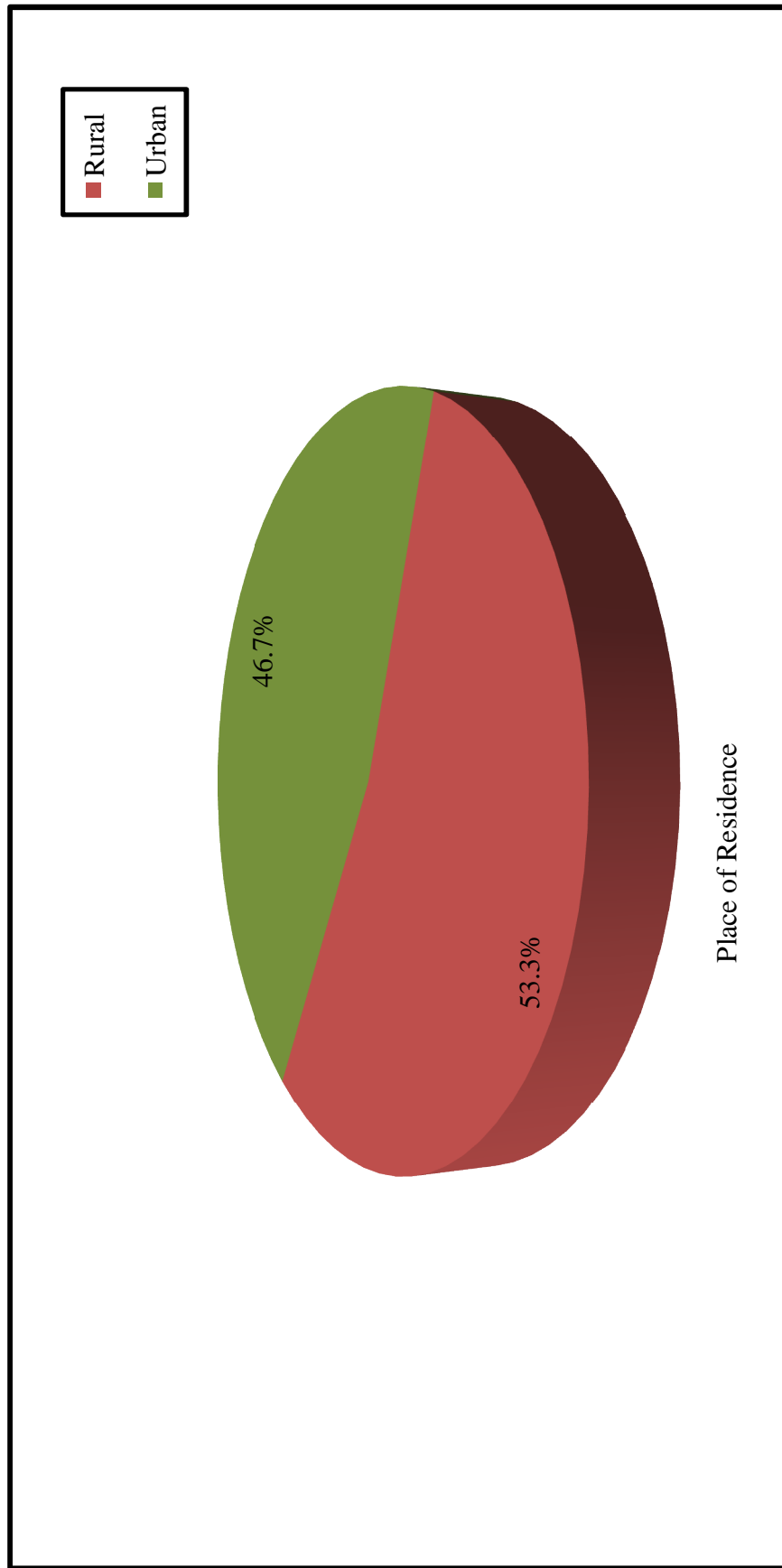


Fig. 6: Percentage distribution of place of residence among non medical professional students.

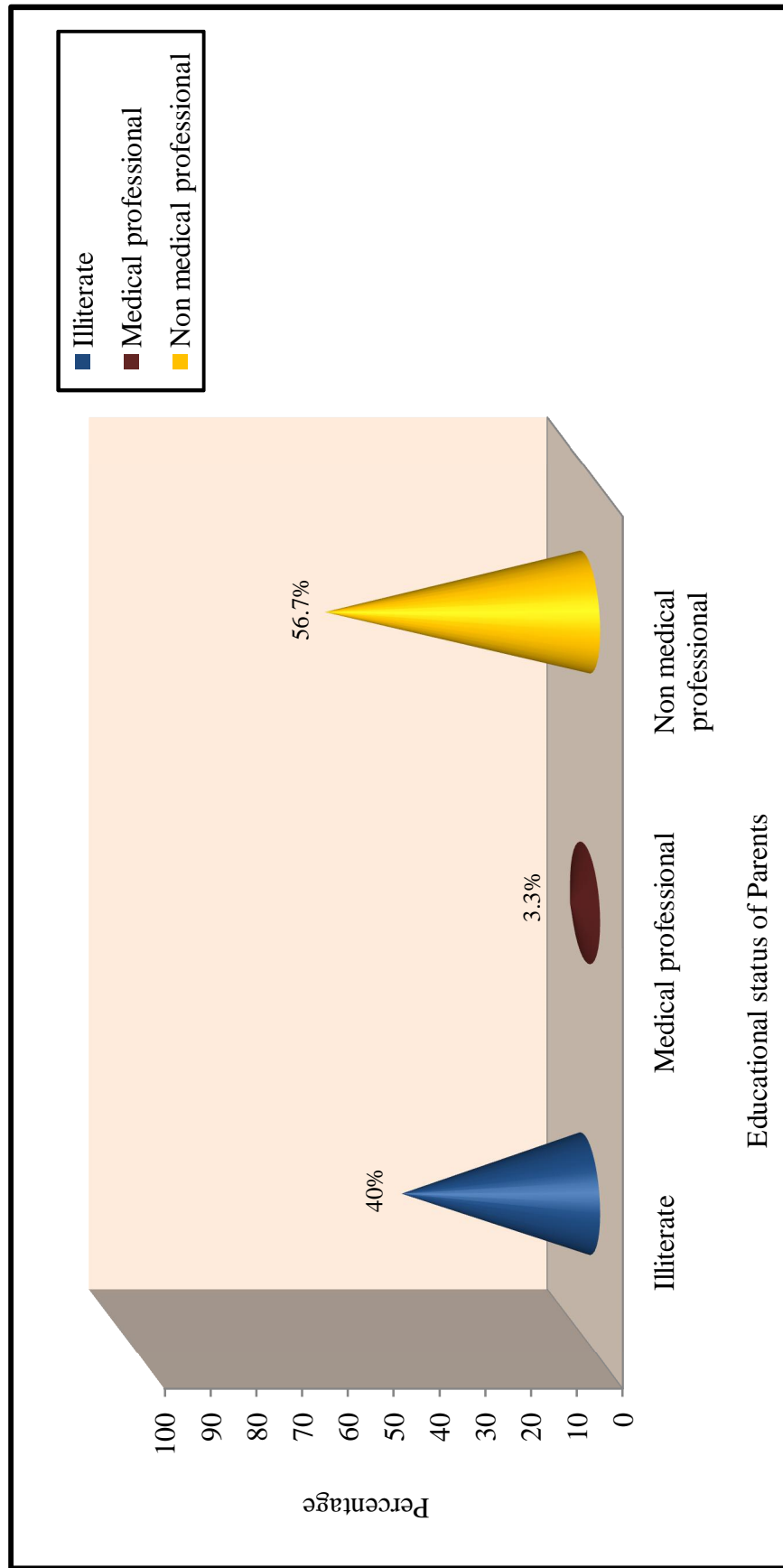


Fig. 7: Percentage distribution of educational status of parents of non medical professional students.

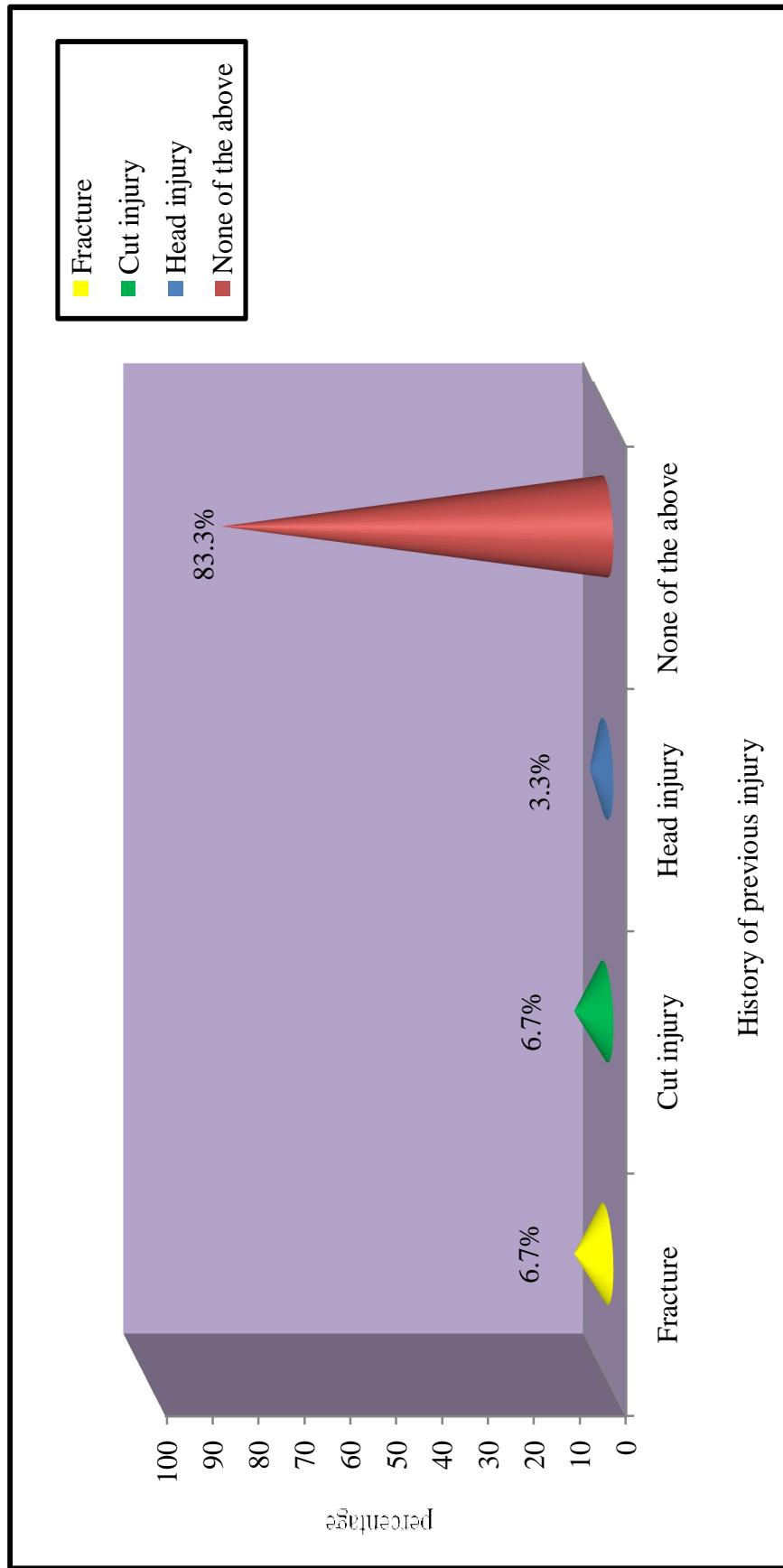


Fig. 8: Percentage distribution of history of any previous injury among non medical professional students.

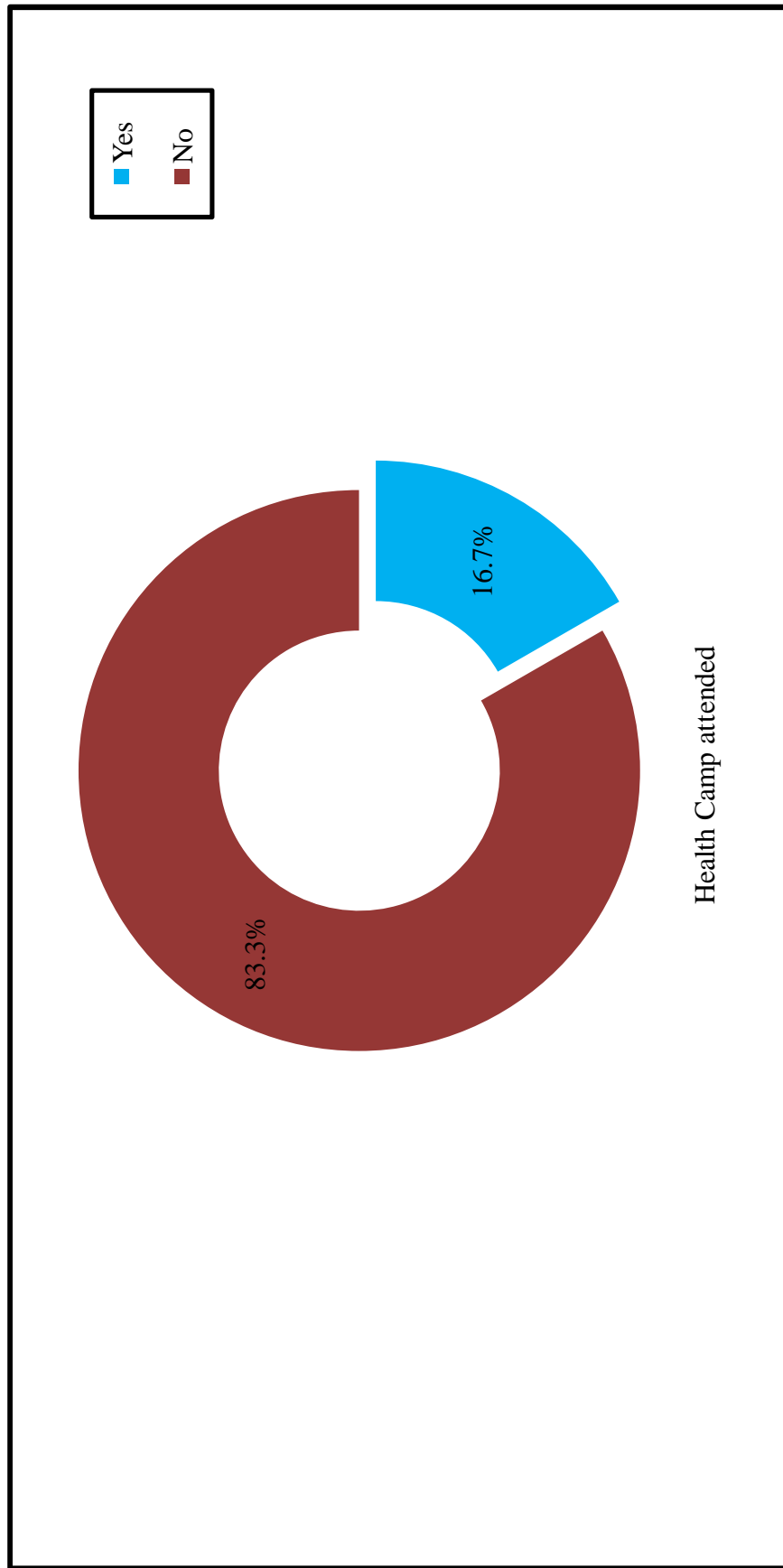


Fig. 9: Percentage distribution of health camp attended by non medical professional students.

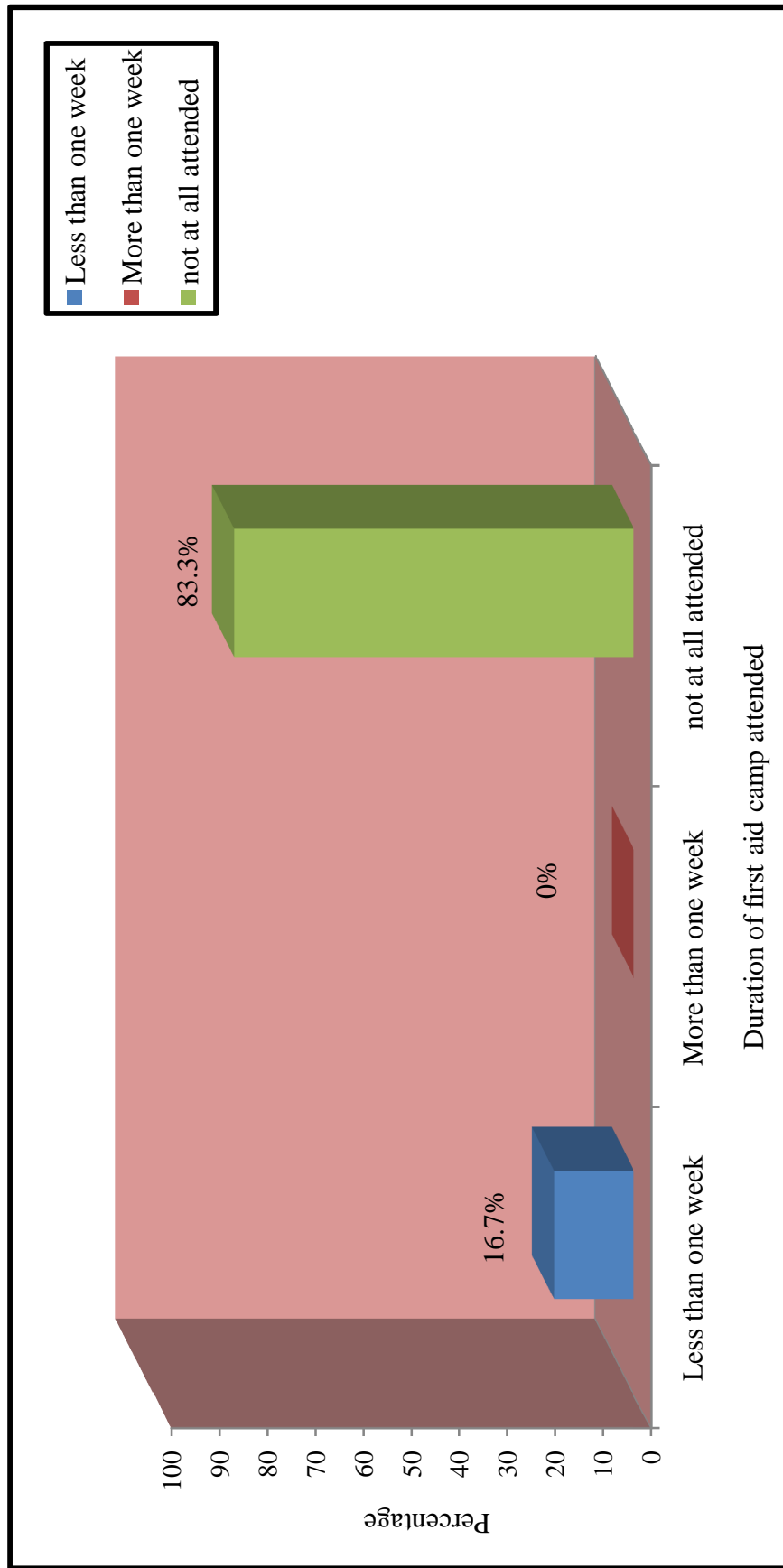


Fig. 10: Percentage distribution of the duration of first aid camp attended by non medical professional students.

SECTION - B

Table 2: Frequency and percentage distribution of pre test level of knowledge regarding selected first aid measures among non medical professional students

N=30

Level of knowledge	Pre test	
	Frequency	Percentage
Inadequate	22	73.3
Moderately adequate	8	26.7
Adequate	0	0.0

Table 2 depicts the frequency and percentage distribution of pre test level of knowledge regarding selected first aid measures among non medical professional students. It reveals that 22 (73.3%) students had inadequate knowledge, 8 (26.7%) students had moderately adequate knowledge and none of the students had adequate knowledge regarding selected first aid measures.

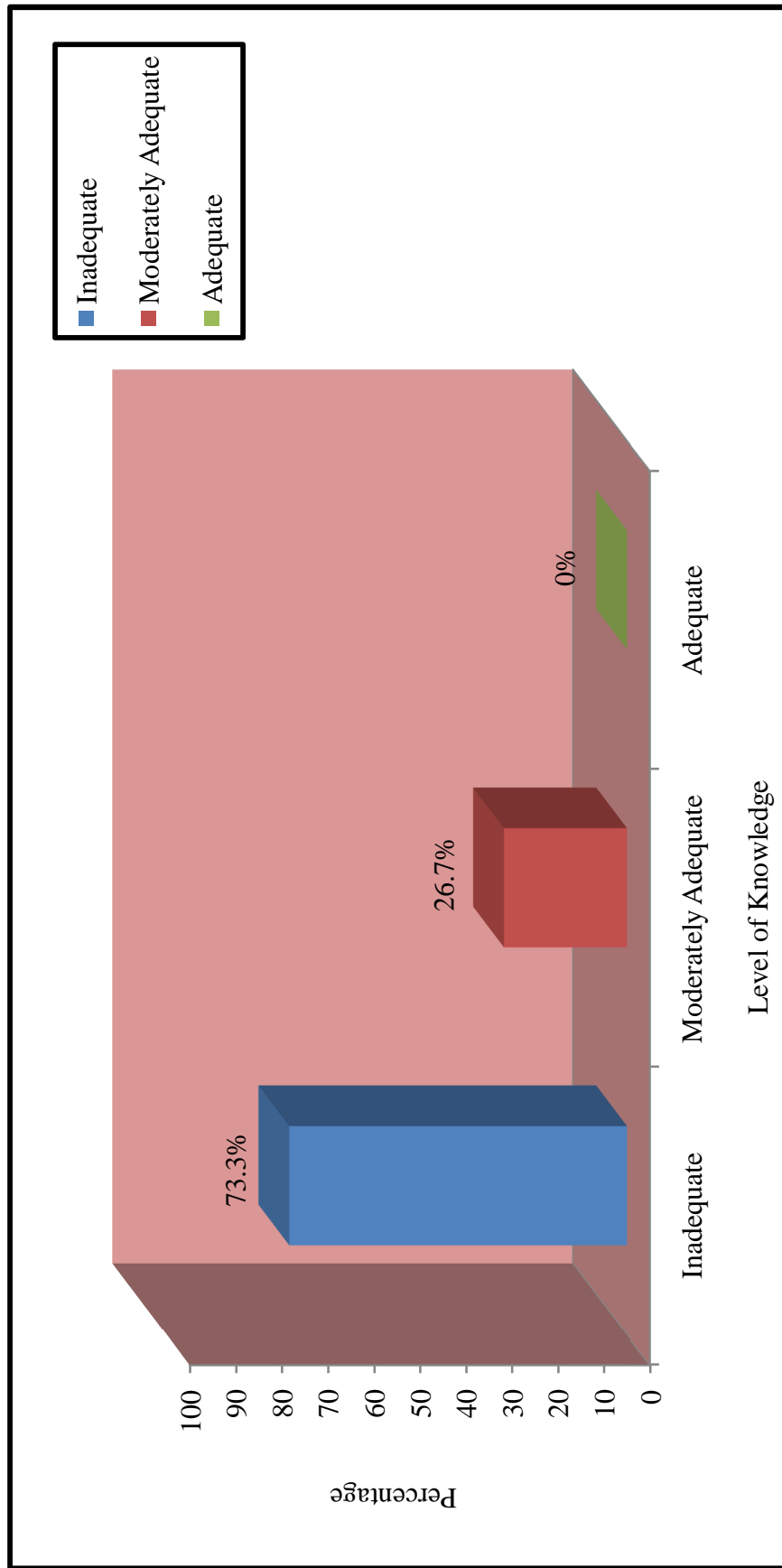


Fig. 11: Percentage distribution of pre test level of knowledge among non medical professional students.

Table 3: Frequency and percentage distribution of pre test level of practice regarding selected first aid measures among non medical professional students

N=30

Level of practice	Pre test	
	Frequency	Percentage
Poor	20	66.7
Fair	10	33.3
Good	0	0.0

Table 3 represents the frequency and percentage distribution of level of practice regarding selected first aid measures among non medical professional students. It reveals that 20 (66.7%) students had poor practice, 10 (33.3%) students had fair practice and none of the students had good practice regarding selected first aid measures.

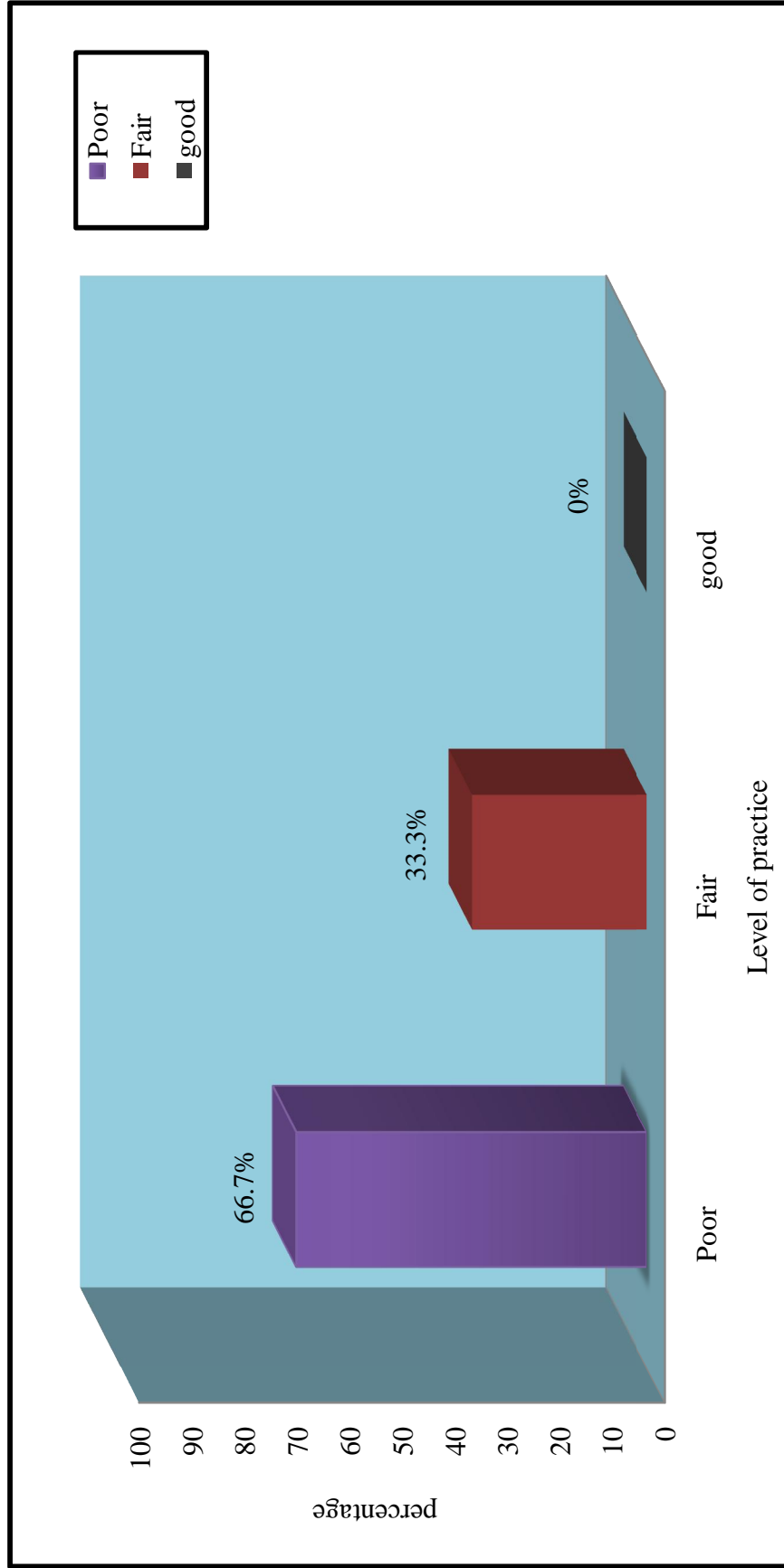


Fig. 12: Percentage distribution of pre test level of practice among non medical professional students.

SECTION – C

Table 4: Frequency and percentage distribution of post test level of knowledge regarding selected first aid measures among non medical professional students

N=30

Level of knowledge	Post test	
	Frequency	Percentage
Inadequate	0	0.0
Moderately adequate	10	33.3
Adequate	20	66.7

Table 4 depicts the frequency and percentage distribution of post test level of knowledge regarding the selected first aid measures among non medical professional students. In the post test score on level of knowledge, the majority of the students 20 (66.7%) had adequate knowledge, 10 (33.3%) students had moderately adequate knowledge and none of the students had inadequate knowledge regarding selected first aid measures.

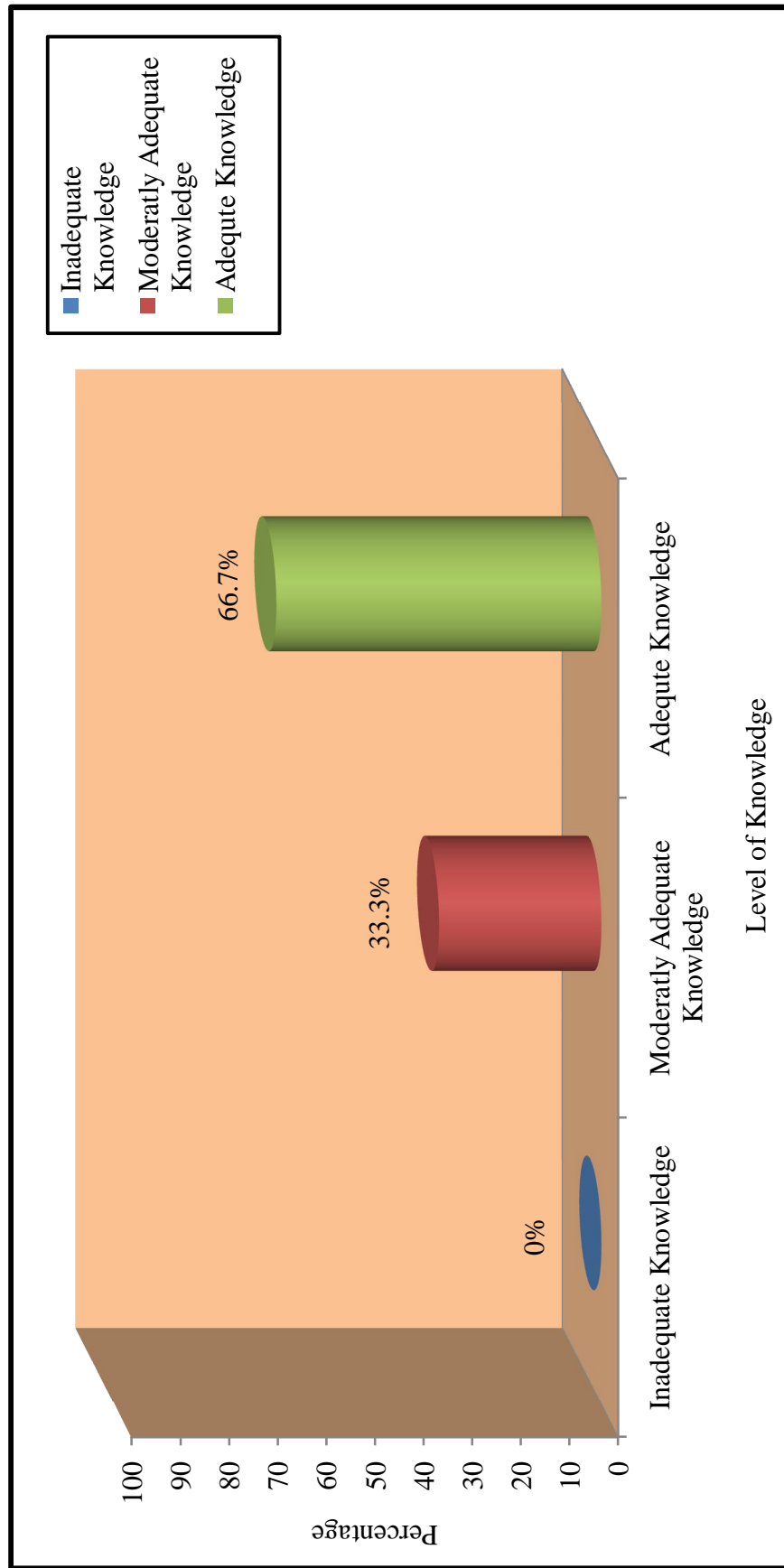


Fig. 13: Percentage Distribution of post test level of knowledge regarding selected first aid measures among non medical professional students.

Table 5: Frequency and percentage distribution of post test level of practice regarding selected first aid measures among non medical professional students.

N=30

Level of practice	Post test	
	Frequency	Percentage
Poor	0	0.0
Fair	7	23.3
Good	23	76.7

Table 5 shows the frequency and percentage distribution of post test level of practice regarding selected first aid measures among non medical professional students. In the post test score on level of practice, it reveals that 23 (76.7%) students had good practice, 7 (23.3%) students had fair practice and none of the students had poor practice regarding selected first aid measures.

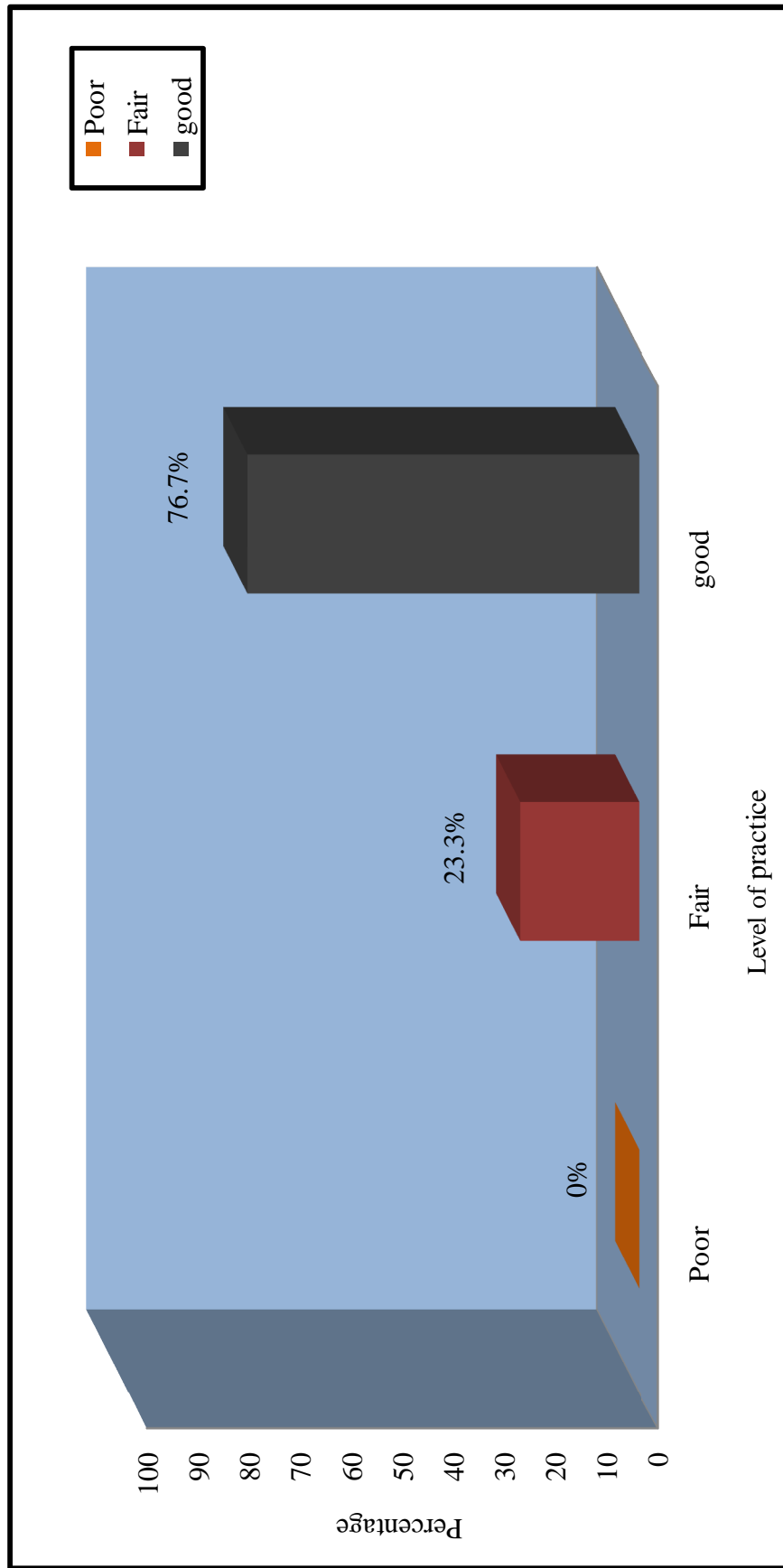


Fig. 14: Percentage Distribution of post test level of practice regarding selected first aid measures among non medical professional students.

SECTION - D

Table 6: Comparison of frequency and percentage of pre test and post test level of knowledge regarding selected first aid measures.

N=30

Level of Knowledge	Pre test		Post test	
	Frequency	Percentage	Frequency	Percentage
Inadequate	22	73.3	0	0
Moderately adequate	8	26.7	10	33.3
Adequate	0	0	20	66.7

Table 6 shows the comparison of frequency and percentage distribution of pre test and post test level of knowledge regarding selected first measures among non medical professional students. In pre test level of knowledge 22 (73.3%) students had inadequate knowledge, 8 (26.7%) students had moderately adequate knowledge and none of the students had adequate knowledge regarding selected first aid measures. In post test level of knowledge 20 (66.7%) students had adequate knowledge, 10 (33.3%) students had moderately adequate knowledge and none of the students had inadequate knowledge regarding selected first aid measures.

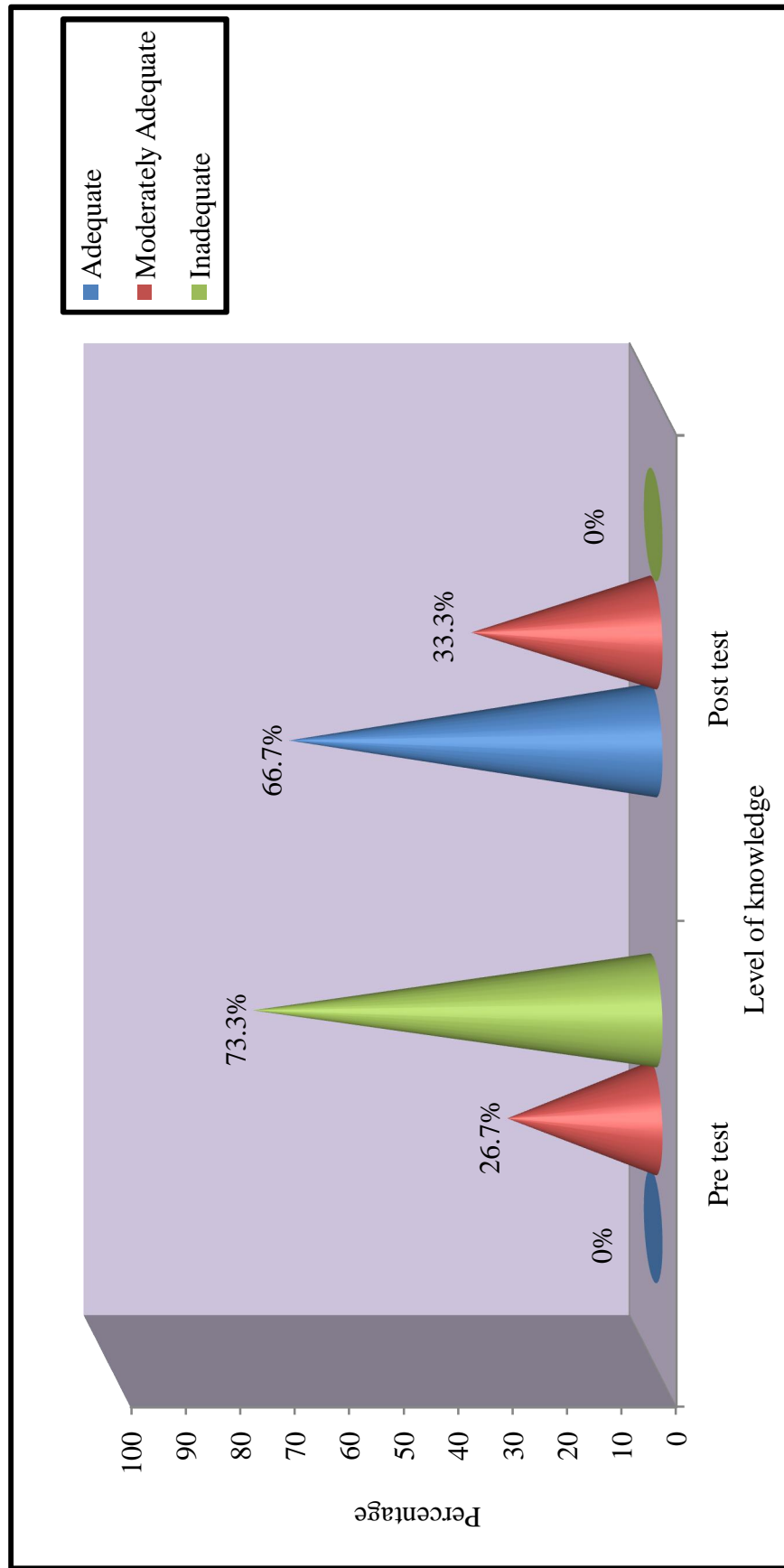


Fig.15: Percentage distribution of pre test and post test level of knowledge regarding selected first aid measures.

Table 7: Comparison of frequency and percentage of pre test and post test level of practice regarding selected first aid measures.

N=30

Level of practice	Pre test		Post test	
	Frequency	Percentage	Frequency	Percentage
Poor	20	66.7	0	0
Fair	10	33.3	7	23.3
Good	0	0	23	76.7

Table 7 shows the comparison of frequency and percentage distribution of pre test and post test level of practice regarding selected first aid measures among non medical professional students. In pre test level of practice 20 (66.7%) students had poor practice, 10 (33.3%) students had fair practice and none of the students had good practice regarding selected first aid measures. In post test level of practice 23 (76.7%) students had good practice, 7 (23.3%) students had fair practice and none of the students had poor practice regarding selected first aid measures.

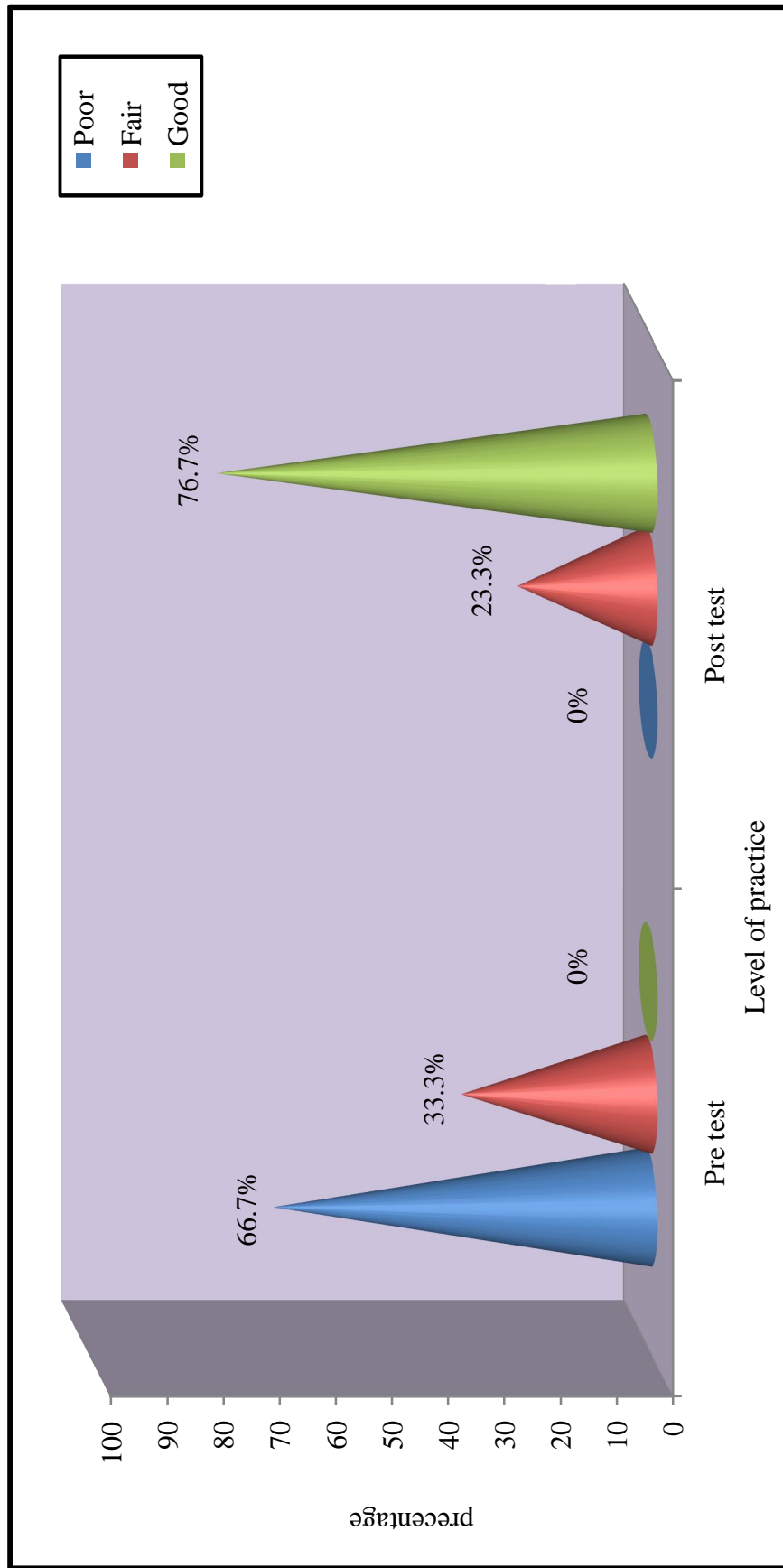


Fig.16: Percentage distribution of pre test and post test level of practice regarding selected first aid measures.

SECTION – E

Table 8: Comparison of mean and standard deviation of pre test and post test level of knowledge regarding selected first aid measures.

N=30

Assessment of knowledge	Mean	Standard Deviation	Paired 't' test
Pre test	18.07	7.26	20.76***
Post test	36.13	14.52	

*** $p < 0.001$

Table 8 shows the comparison of mean and standard deviation between pre test and post test level of knowledge regarding selected first aid measures. Analysis reveals that the pre test level of knowledge mean score was 18.07 with the standard deviation of 7.26 and the post test level of knowledge mean score was 36.13 with the standard deviation of 14.52. The paired 't' test value of 20.76 was very high significant at the level of $p < 0.001$. The difference between pre test and post test level of knowledge score is high and it is statistically very high significant. Thus, it indicates the effectiveness of training programme regarding selected first aid measures.

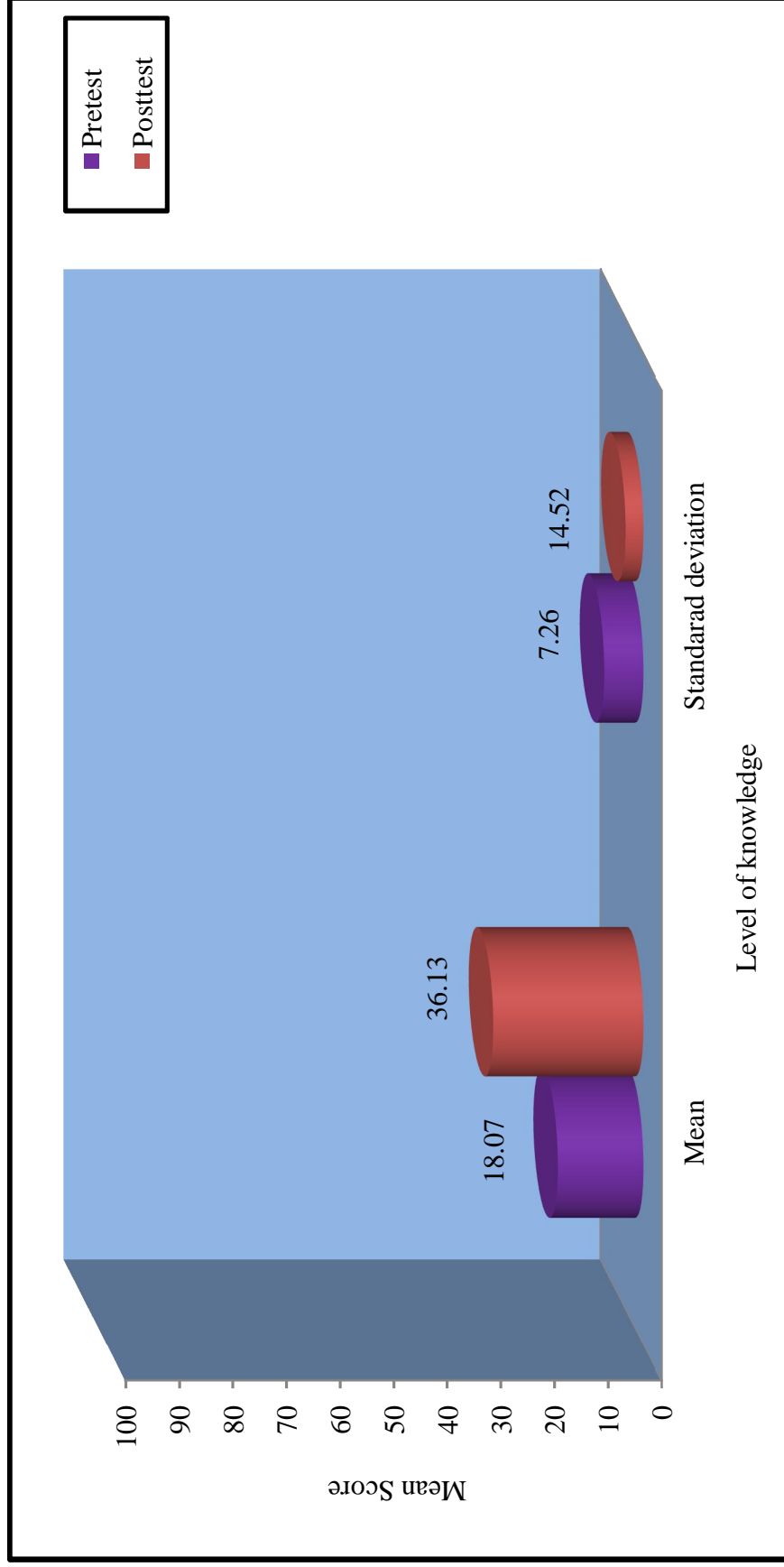


Fig. 17: Mean and Standard deviation of pre test and post test level of knowledge among non medical professional students.

Table 9: Comparison of mean and standard deviation of pre test and post test level of practice regarding selected first aid measures.

N=30

Assessment of Practice	Mean score	Standard Deviation	Paired 't' test
Pre test	15.93	7.30	22.17***
Post test	27.97	3.32	

***p<0.001

Table 9 shows the Comparison of mean and standard deviation between pre test and post test level of practice regarding selected first aid measures. Analysis reveals that the pre test level of practice mean score was 15.93 with the standard deviation of 7.30 and the post test level of practice mean score was 27.97 with the standard deviation of 3.32. The paired 't' test value of 22.17 was very high significant at the level of $p < 0.001$. The difference between pre test and post test level of practice score is high and it is statistically very high significant. Thus, it indicates the effectiveness of training programme regarding selected first aid measures.

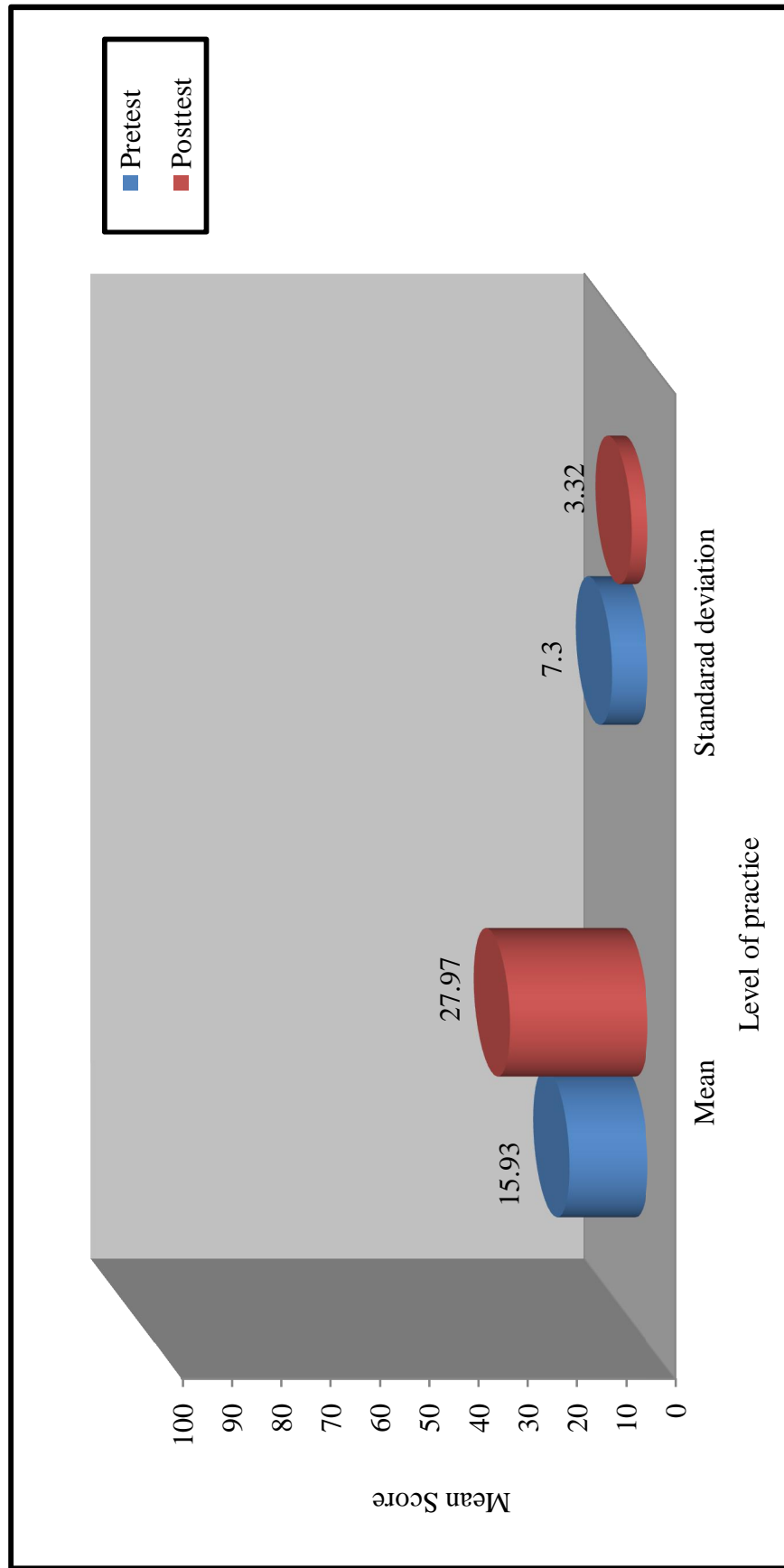


Fig. 18: Mean and Standard deviation of pre test and post test level of Practice among non medical professional students.

SECTION - F

Table 10: Correlation between post test level of knowledge and practice regarding selected first aid measures among non medical professional students.

N=30

Assessment	Mean score	Standard deviation	Karl pearson Correlation Coefficient r
Knowledge	36.13	14.52	r =0.54 S**
Practice	27.97	3.32	

** P<0.01

Table 10 depicts the correlation between post test level of knowledge and practice regarding selected first aid measures among non medical professional students. The analysis reveals that the correlation between post test level of student's knowledge and practice regarding selected first aid measures were moderately correlated at the level of $p < 0.01$.

SECTION - G

Table 11: Association of pre test level of knowledge regarding selected first aid measures with their demographic variables.

N=30

S.No	Demographic variables	Pre test level of knowledge				Chi square χ^2
		Inadequate		Moderately adequate		
		n	%	n	%	
1.	Age in years					$\chi^2 = 0.17$ df= 1 NS
	17-18	18	75.0	6	25.0	
	19-20	4	66.7	2	33.3	
2.	Sex					$\chi^2 = 3.13$ df= 1 NS
	Male	6	54.5	5	45.5	
	Female	16	84.2	3	15.8	
3.	Department					$\chi^2 = 5.88$ df= 3 NS
	Mechanical engineering	4	50.0	4	50.0	
	Civil engineering	4	80.0	1	20.0	
	Auto mobile engineering	2	50.0	2	50.0	
	Computer engineering	12	92.3	1	7.7	
4.	Place of residence					$\chi^2 = 0.05$ df= 1 NS
	Rural	12	75.0	4	25.0	
	Urban	10	71.4	4	28.6	
5.	Educational status of parents					$\chi^2 = 3.73$ df= 2 NS
	Illiterate	8	66.7	4	33.3	
	Medical professional	0	0.0	1	100.0	
	Non medical professional	14	82.4	3	17.6	
6.	History of any previous injury					$\chi^2 = 2.18$ df= 3 NS
	Fracture	2	100.0	0	0.0	
	Cut injury	2	100.0	0	0.0	
	Head injury	1	100.0	0	0.0	
	None of the above	17	68.0	8	32.0	
7.	Health camp attended					$\chi^2 = 0.55$ df= 1 NS
	Yes	3	60.0	2	40.0	
	No	19	76.0	6	24.0	
8.	Duration of first aid camp attended					$\chi^2 = 0.55$ df= 1 NS
	Less than one week	3	60.0	2	40.0	
	More than one week	0	0.0	0	0.0	
	Not at all attended	19	76.0	6	24.0	

NS- Non significant

Table 11 depicts the association of pre test level of knowledge regarding selected first aid measures with their demographic variables. The analysis reveals that there was no significant association found between pre test level of knowledge with their demographic variables.

Table 12: Association of post test level of knowledge regarding selected first aid measures with their demographic variables

N=30

S.No	Demographic variables	Post test level of knowledge				Chi square χ^2
		Moderately adequate		Adequate		
		n	%	n	%	
1.	Age in years 17-18 19-20	10 0	41.7 0.0	14 6	58.3 100.0	$\chi^2 = 5.75$ df= 1 S*
2.	Sex Male Female	3 7	27.3 36.8	8 12	72.7 63.2	$\chi^2 = 0.28$ df= 1 NS
3.	Department Mechanical engineering Civil engineering Auto mobile engineering Computer engineering	2 1 1 6	25.0 20.0 25.0 46.2	6 4 3 7	75.0 80.0 75.0 53.8	$\chi^2 = 1.73$ df= 3 NS
4.	Place of residence Rural Urban	7 3	43.8 21.4	9 11	56.3 78.6	$\chi^2 = 1.67$ df= 1 NS
5.	Educational status of parents Illiterate Medical professional Non medical professional	5 0 5	41.7 0.0 29.4	7 1 12	58.3 100.0 70.6	$\chi^2 = 0.99$ df= 2 NS
6.	History of any previous injury Fracture Cut injury Head injury None of the above	1 0 0 9	50.0 0.0 0.0 36.0	1 2 1 16	50.0 100.0 100.0 64.0	$\chi^2 = 1.83$ df= 3 NS
7.	Health camp attended Yes No	0 10	0.0 40.0	5 15	100.0 60.0	$\chi^2 = 4.66$ df= 1 S*
8.	Duration of first aid camp attended Less than one week More than one week Not at all attended	0 0 10	0.0 0.0 40.0	5 0 15	100.0 0.0 60.0	$\chi^2 = 4.66$ df= 2 S*

NS- Non significant, S- statistically significant, *p<0.05

Table 12 shows the association of post test level of knowledge regarding selected first aid measures among non medical professional students with their selected demographic variables.

The chi square value of 5.75 showed that there was a significant association between the age of the non medical professional students and post test level of knowledge after the conduction of training programme regarding selected first aid measures at the level of $p < 0.05$. The chi square value of 4.66 showed that there was a significant association between the health camp attended by non medical professional students and post test level of knowledge after the conduction of training programme regarding selected first aid measures at the level of $p < 0.05$.

The chi square value of 4.66 showed that there was a significant association between the course of camp for first aid and post test level of knowledge after the conduction of training programme regarding selected first aid measures at the level of $p < 0.05$.

So the training programme regarding selected first aid measures among non medical professional students was effective.

Table 13: Association of pre test level of practice regarding selected first aid measures with their demographic variables.

N=30

S.No	Demographic variables	Pre test level of practice				Chi square χ^2
		Inadequate		Moderately adequate		
		n	%	n	%	
1.	Age in years 17-18 19-20	15 5	62.5 83.3	9 1	37.5 16.7	$\chi^2 = 0.93$ df= 1 NS
2.	Sex Male Female	8 12	72.7 63.2	3 7	27.3 36.8	$\chi^2 = 0.28$ df= 1 NS
3.	Department Mechanical engineering Civil engineering Auto mobile engineering Computer engineering	6 4 3 7	75.0 80.0 75.0 53.8	2 1 1 6	25.0 20.0 25.0 46.2	$\chi^2 = 1.73$ df= 3 NS
4.	Place of residence Rural Urban	12 8	75.0 57.1	4 6	25.0 42.9	$\chi^2 = 1.07$ df= 1 NS
5.	Educational status of parents Illiterate Medical professional Non medical professional	9 1 10	75.0 100.0 58.8	3 0 7	25.0 0.0 41.2	$\chi^2 = 1.34$ df= 2 NS
6.	History of any previous injury Fracture Cut injury Head injury None of the above	1 1 1 17	50.0 50.0 100.0 68.0	1 1 0 8	50.0 50.0 0.0 32.0	$\chi^2 = 1.02$ df= 3 NS
7.	Health camp attended Yes No	5 15	100.0 60.0	0 10	0.0 40.0	$\chi^2 = 3.00$ df= 1 NS
8.	Duration of first aid camp attended Less than one week More than one week Not at all attended	5 0 15	100.0 0.0 60.0	0 0 10	0.0 0.0 40.0	$\chi^2 = 3.00$ df= 2 NS

NS- Non significant

Table 13 depicts the association of pre test on level of practice regarding selected first aid measures with their selected demographic variables. The analysis revealed that there was no significant association found between pre test level of practice with their demographic variables.

Table 14: Association of post test level of practice regarding selected first aid measures with their demographic variables.

N=30

S.No	Demographic variables	Post test level of practice				Chi square χ^2
		Moderately adequate		Adequate		
		n	%	n	%	
1.	Age in years 17-18 19-20	7 0	29.0 0.0	17 6	70.8 100.0	$\chi^2 = 3.84$ df= 1 S*
2.	Sex Male Female	5 2	45.4 10.5	6 17	54.5 89.5	$\chi^2 = 4.75$ df= 1 S*
3.	Department Mechanical engineering Civil engineering Auto mobile engineering Computer engineering	1 1 2 3	12.5 20.0 50.0 23.1	7 4 2 10	87.5 80.0 50.0 76.9	$\chi^2 = 2.15$ df= 3 NS
4.	Place of residence Rural Urban	6 1	37.5 7.1	10 13	62.5 92.9	$\chi^2 = 4.22$ df= 1 S*
5.	Educational status of parents Illiterate Medical professional Non medical professional	3 0 4	25.0 0.0 23.5	9 1 13	75.0 100.0 76.5	$\chi^2 = 0.32$ df= 2 NS
6.	History of any previous injury Fracture Cut injury Head injury None of the above	1 0 0 6	50.0 0.0 0.0 24.0	1 2 1 19	50.0 100.0 100.0 76.0	$\chi^2 = 1.71$ df= 3 NS
7.	Health camp attended Yes No	2 5	40.0 20.0	3 20	60.0 80.0	$\chi^2 = 0.93$ df= 1 NS
8.	Duration of first aid camp attended Less than one week More than one week Not at all attended	2 0 5	40.0 0.0 20.0	3 0 20	60.0 0.0 80.0	$\chi^2 = 0.93$ df= 2 NS

NS- Non significant, S- Statistically significant, *p<0.05

Table 14 depicts the association of post test level of practice regarding selected first aid measures with their selected demographic variables of non medical professional students. The chi square value of 3.84 showed that there was a significant association between the age of the non medical professional students and post test level of practice after the conduction of training programme regarding selected first aid measures at the level of $p < 0.05$. The chi square value of 4.75 showed that there was a significant association between the sex of the non medical professional students and post test level of practice after the conduction of the training programme regarding selected first aid measures at the level of $p < 0.05$.

The chi square value of 4.22 showed that there was a significant association between the place of residence of the non medical professional students and post test level of practice after the conduction of the training programme regarding selected first aid measures at the level of $p < 0.05$.

So the training programme regarding selected first aid measures among non medical professional students was effective.

DISCUSSION

CHAPTER V

DISCUSSION

This chapter deals with discussion of the result obtained from the statistical analysis. This study aimed to assess the effectiveness of training programme on knowledge and practice regarding selected first aid measures among non medical professional students in selected institutions at Chennai.

The hypothesis formulated was that there was a significant association between training programme and level of knowledge and practice regarding selected first aid measures. The review of literature included related studies which provide a strong foundation for the study including the basis for conceptual frame work and formation of tool.

The conceptual framework for this study was developed based on Imogen king's goal attainment theory. The research design used in the study was pre experimental one group pre test and post test design. It was carried out with 30 participants who fulfilled the inclusion criteria. Purposive sampling technique was used to select the sample.

A structured questionnaire and check list was given to the participants to assess the pre test level of knowledge and practice regarding selected first aid measures among non medical professional students. Training programme was conducted to the participants for the duration of 30 to 45 minutes. The post test was conducted after fifth to seventh day by using the same tool.

The collected data was analysed using descriptive and inferential statistics. The distribution of demographic variables of study showed that 24 (80.0%) students were between the age group of 17-18 years and remaining 6 (20.0%) students were in the age group of 19-20 years. In accordance with sex 11 (36.7%) students were male and 19 (63.3%) were female.

Regarding the various departments of the students, the majority of the students 13 (43.3%) were in computer engineering, 8 (26.7%) were mechanical engineering, 5 (16.7%) were civil engineering and 4 (13.3%) were auto mobile engineering. Considering the place of residence, the majority of students 16 (53.3%) were from rural area and 14 (46.7%) were from urban area.

With regard to their educational status of their parents, the majority 17 (56.7%) parents were belongs to non medical professionals, 12 (40%) were illiterate, 1 (3.3%) were belongs to medical professionals. With regard to the history of any previous injury, 25 (83.3%) students had no history of previous injury, 2 (6.7%) students had fracture, 2 (6.7%) students had cut injury and 1 (3.3%) students had head injury.

In relation to health camp attended, 25 (83.3%) students has not attended the camp and 5 (16.7%) students has attended the camp. With regard to the duration of course of study for first aid, 25 (83.3%) students has not at all participated in first aid camp and 5 (16.7%) students had attended the first aid camp less than one week.

The first objective was to assess the pre test level of knowledge and practice regarding selected first aid measures among non medical professional students.

In pre test 22 (73.3%) students had inadequate knowledge, 8 (26.7) students had moderately adequate knowledge and non of the students had adequate knowledge, with regard to practice, it reveals that 20 (66.7%) students had poor practice, 10 (33.3%) students had fair practice and none of the students had good practice regarding selected first aid measures.

The study correlates with Delavar. M. A., et al., (2012) who has conducted a cross sectional study to assess the knowledge, attitude and practices of relief workers posted in rescue and relief bases of the Red Crescent society at Iran. This study was conducted among 219 relief workers gathered from a 13 different cities, the cluster random sampling was used to select the data and used a pretest questionnaires to assess the knowledge and attitude. This study result shows that the 83% of relief

workers knew how to correctly perform a cardiopulmonary resuscitation while 94% of relief workers did not know how to perform cardiopulmonary resuscitation. The researcher concluded that the relief workers demonstrated moderate level of knowledge, attitude and practice towards the first aid.

The study correlates with study done by Robertson. A., et al., (2010) who has conducted a study to assess the attitude of high school students regarding the problem of first aid in emergency trauma. This study was conducted among 642 students from randomized selection from various high schools. A questionnaire with single choice answers was administered to them. This study results showed that about 80% of the respondents know the importance of first aid, only 21% undertakes the first aid procedure in emergency and 67% claimed that their skills are insufficient. This study concluded that the level of first aid training is very poor and students do not learn practical skills and the training should start from primary school itself.

The second objective was to assess the post test level of knowledge and practice regarding selected first aid measures among non medical professional students.

In post test level of knowledge 20 (66.7%) students had adequate knowledge, 10 (33.3%) students had moderately adequate knowledge and none of the students had inadequate knowledge. In the post test level of practice 23 (76.7%) students had good practice, 7 (23.3%) students had fair practice and none of the students had poor practice.

The study correlates with Eldosoky. R. S., et al., (2012) who has reviewed a cross sectional study to evaluate knowledge, attitude and practice about first aid on home related injuries among children of the rural mother at Egypt. This study was conducted among 1450 rural mothers of the children aged up to 12 years. The interview questionnaire method was used regarding certain aspects like home injuries, cut wound, fall and fracture, burns, poisoning and foreign body aspiration. This study result showed that the mothers with younger age, higher education and high socio economic status were having more knowledge regarding first aid.

The study correlates with study done by Parnell. M., et al., (2006) has reviewed a study to assess the knowledge and attitude towards resuscitation in Newzealand high school students. This study was conducted among 494 students with the age group of 18 to 20 years. A questionnaires method was used to assess both knowledge and attitude regarding resuscitation. This study results showed that the students has shown poor theoretical knowledge regardless of female and male students. This study finding suggested that although most high school students were willing and motivated to learn Cardio pulmonary resuscitation, a smaller percentage of students had a negative attitude towards Cardio pulmonary resuscitation that would act as a barrier to future learning or performance of resuscitation. The researcher recommended that more cardiopulmonary resuscitation training to high school should be introduced.

The third objective was to assess the effectiveness of training programme on knowledge and practice regarding selected first aid measures among non medical professional students.

In comparison of mean and standard deviation between pre test and post test level of knowledge regarding selected first aid measures. Analysis reveals that the pre test level of knowledge mean score was 18.07 with the standard deviation of 7.26 and the post test level of knowledge mean score was 36.13 with the standard deviation of 14.52. The paired 't' test value of 20.76 was very high significant at the level of $p < 0.001$. The difference between pre test and post test level of knowledge score is high and it is statistically very high significant.

In comparison of mean and standard deviation between pre test and post test level of practice regarding selected first aid measures. Analysis reveals that the pre test level of practice mean score was 15.93 with the standard deviation of 7.30 and the post test level of practice mean score was 27.97 with the standard deviation of 3.32. The paired 't' test value of 22.17 was very high significant at the level of $p < 0.001$. The difference between pre test and post test level of practice score is high and it is statistically very high significant. Thus, it indicates the effectiveness of training programme regarding selected first aid measures.

The study correlates with Maria. S. J., et al., (2013) who has conducted a study to assess the effectiveness of lecture cum demonstration on first aid for selected minor injuries among Accredited social health activities in selected area of Udupi district. The researcher used the evaluative approach with pre experimental one group pre test and post test design. This study result shows that the majority 63.3% the sample were serving as ASHA since 1 to 2 years, majority 83.3% of them had no previous experience of giving first aid and 100% of them had obtained information about first aid through various sources, majority 93.3% of them had not attended any training on first aid. This Study found that the middle most 50% post test knowledge scores were higher than the pre test knowledge score indicating the significant improvement in the knowledge on first aid and improvement in skills in first aid for open wounds, closed fracture of the arm, snake bite, dog bite and bee sting after teaching through lecture cum demonstration. The researcher concluded that the lecture cum demonstration on first aid measures was effective in enhancing the knowledge and skills of ASHA.

The fourth objective was to correlate the post test level of knowledge and practice regarding selected first aid measures among non medical professional students.

The karl pearson correlation coefficient value of $r = 0.54$ at the level of $p < 0.01$ which showed moderate correlation between post test level of knowledge and practice regarding selected first aid measures among non medical professional students.

The study correlate with Devina, E. R. & Udaya, K. (2012) who has conducted a descriptive study to assess the knowledge, practice on occupational hazards and attitude towards utilization of safety measures among fishermen at Malpe fishing harbor for the duration of 1 month. This study was conducted among 40 fishermen by using convenient sampling technique. The data collection procedure was done by collecting face to face interview using structured knowledge questionnaire with 30 items on knowledge on occupational hazards, 3 point scale to elicit the self reported practices in prevention of occupational hazards and by 5 point likert scale to determine the attitude towards utilization of safety measures.

The study result showed that regarding knowledge, 55% of the subjects had inadequate knowledge and rest of them had adequate knowledge regarding work related hazards. Result regarding the practice, 55.29% of the subjects had moderately adequate practices and area wise practice score had revealed that subjects had poor practices concerning personal protective devices. There was significant relationship between knowledge and practice score as well as practice and attitude scores at 0.05 level of significance. The researcher concluded that there was no significant correlation between knowledge and attitude scores. The study highlights the need to inspire the fishermen to improve their safety at work place and develop positive attitude about utilization of safety devices

The fifth objective was to associate the pre test and post test level of knowledge and practice regarding selected first aid measures among non medical professional students with their selected demographic variables.

In association with the demographic variables with pre test and post test level of knowledge, there is no statistically significant association found between pre test level of knowledge with their demographic variables but in post test level of knowledge there was a significant association found. The chi square value of 5.75 showed that there was a significant association between the age of the non medical professional students and post test level of knowledge after the conduction of training programme regarding selected first aid measures at the level of $p < 0.05$. The chi square value of 4.66 showed that there was a significant association between the health camp attended by non medical professional students and post test level of knowledge after the conduction of training programme regarding selected first aid measures at the level of $p < 0.05$.

The chi square value of 4.66 showed that there was a significant association between the course of camp for first aid and post test level of knowledge after the conduction of training programme regarding selected first aid measures at the level of $p < 0.05$.

In association with the level of practice, there is no statistically significant association found between pre test level of practice with their demographic variables but in post test level of practice there was a significant association found. The chi square value of 3.84 showed that there was a significant association between the age of the non medical professional students and post test level of practice after the conduction of training programme regarding selected first aid measures at the level of $p < 0.05$. The chi square value of 4.75 showed that there was a significant association between the sex of the non medical professional students and post test level of practice after the conduction of the training programme regarding selected first aid measures at the level of $p < 0.05$.

The chi square value of 4.22 showed that there was a significant association between the place of residence of the non medical professional students and post test level of practice after the conduction of the training programme regarding selected first aid measures at the level of $p < 0.05$. So the training programme regarding selected first aid measures among non medical professional students was effective.

*SUMMARY,
CONCLUSION,
NURSING
IMPLICATIONS,
RECOMMENDATIONS,
AND LIMITATIONS*

CHAPTER VI

SUMMARY, CONCLUSION, NURSING IMPLICATIONS, RECOMMENDATIONS AND LIMITATIONS.

The heart of the research lies in reporting the finding of the study. This is most creative and demanding part of study. This chapter gives a brief account of the present study including the conclusion drawn from the finding, recommendations, limitation of the study, suggestions for the study and nursing implications. The present study was to assess the effectiveness of training programme on knowledge and practice regarding selected first aid measures among non medical professional students in selected institution at Chennai.

SUMMARY

First aid is the provision of initial care for an illness or injury. It is usually performed by non expert, but trained personnel to a sick or injured person until definitive medical treatment can be accessed. Certain self limiting illnesses or minor injuries may not require further medical care and the first aid intervention. It generally consists of a series of simple and in some cases, potentially life saving techniques that an individual can be trained to perform with minimal equipment

The objectives of the study were as follows

1. To assess the pre test level of knowledge and practice regarding selected first aid measures among non medical professional students.
2. To assess the post test level of knowledge and practice regarding selected first aid measures among non medical professional students.
3. To assess the effectiveness of training program on knowledge and practice regarding selected first aid measures among non medical professional students.
4. To correlate the post test level of knowledge and practice regarding selected first aid measures among non medical professional students.

5. To associate the pre test and post test level of knowledge and practice regarding selected first aid measures among non medical professional students with their selected demographic variables.

The hypothesis formulated was there is a significant association between training programme and level of knowledge and practice regarding selected first aid measures among non medical professional students. The review of literature included the related studies which provide a strong foundation for the study including the basis for conceptual frame work and formation of tool.

The conceptual framework for this study was developed based on Imogen king's goal attainment theory. The research design used in the study was pre experimental one group pre test and post test design. It was carried out with 30 participants who fulfilled the inclusive criteria. Purposive sampling technique was used to select the sample.

A structured questionnaires and check list was given to the participants to assess the pre test level of knowledge and practice regarding selected first aid measures among non medical professional students. Training programme was given to participants with the duration of 30 to 45 minutes. The post test was conducted after fifth to seventh day by using the same tool.

The data collection was analysed using descriptive and inferential statistics. The distribution of demographic variables of study showed the majority of students 24 (80.0%) were between age group of 17-18 years and remaining 6 (20.0%) were age group of 19-20 years. In accordance with sex 11 (36.7%) students were male and 19 (63.3%) were female.

Regarding the various departments of the students, the majority of the students 13 (43.3%) were in computer engineering, 8 (26.7%) were in mechanical engineering, 5 (16.7%) were in civil engineering and 4 (13.3%) were in auto mobile engineering. Considering the place of residence, the majority of students 16 (53.3%) were from rural area and 14 (46.7%) were from urban area.

With regard to their educational status of their parents, the majority 17 (56.7%) parents were belongs to non medical professional, 12 (40%) were illiterate, 1 (3.3%) were belongs to medical professional. With regard to the history of any previous injury, majority 25 (83.3%) had no history of previous injury, 2 (6.7%) had fracture, 2 (6.7%) had cut injury and 1 (3.3%) had head injury.

In relation to health camp attended, majority of students 25 (83.3%) has not attended the camp and 5 (16.7%) has attended the camp. With regard to the duration first aid camp attended, majority of students 25 (83.3%) has not at all participated in first aid camp and 5 (16.7%) had attended the first aid camp less than one week.

In comparison of mean and standard deviation between pre test level of knowledge regarding selected first aid measures. Analysis reveals that the pre test level of knowledge mean score was 18.07 with the standard deviation of 7.26 and the post test level of knowledge mean score was 36.13 with the standard deviation of 14.52. The paired 't' test value of 20.76 was very high significant at the level of $p < 0.001$. The difference between pre test and post test level of knowledge score is high and it is statistically very high significant. In Comparison of mean and standard deviation between pre test and post test level of practice regarding selected first aid measures. Analysis reveals that the pre test level of practice mean score was 15.93 with the standard deviation of 7.30 and the post test level of practice mean score was 27.97 with the standard deviation of 3.32. The paired 't' test value of 22.17 was very high significant at the level of $p < 0.001$. The difference between pre test and post test level of practice score is high and it is statistically very high significant. Thus, it indicates the effectiveness of training programme regarding selected first aid measures.

The correlation between post test level of student's knowledge and practice regarding selected first aid measures were moderately correlated at the level of $p < 0.01$. Hence it indicates the effectiveness of training programme regarding selected first aid measures among non medical professional students.

CONCLUSION

A first aid measures is very essential for all medical or non medical personals in order to preserve their life and to save the life of victims. The injuries or accidental scenes are more commonly seen among college students and they should know the accurate way of delivering first aid help for the needy. Through this training programme students can learn and understand better information regarding first aid measures and prevent the suffering of the students during emergency situations.

Hence the investigator found that there was a significant difference in the level of knowledge and practice after giving training programme regarding selected first aid measures.

NURSING IMPLICATIONS

The findings of the study have implications in various areas of nursing service, nursing education, nursing administration, nursing research.

Nursing Practice

An education can be provided to other non medical professional students about the selected first aid measures and its effectiveness which will benefit not only to the medical professional but also to the non medical professional students during the unavailability of any medical attention.

The nurse can teach this training programme not only to the engineering students but also to the other non medical professional students in order to improve their basic skills in first aid management. It improves the skill of nursing care enlighten the knowledge on health education first aid measures. More knowledge regarding first aid measures can save the life of people and minimize their sufferings.

Nursing Education

Nurses need to have adequate knowledge about the first aid measures. They need continuing education regarding day to day advancement in the field of nursing. Student nurses should get the knowledge of first aid measures. Nurses are in a position to educate the students at the earliest possible time about the first aid measures with adequate knowledge, training and skill. Nurses can give health education about first aid emergencies.

Nursing Administration

Nursing administrators should encourage and monitor the nurses while performing their role in an efficient manner. Nursing administration should encourage nurses to educate the patients and family members regarding the first aid measures. So that we can prevent the death among adolescence.

Nursing Research

Nursing research helps to broaden the boundaries of our knowledge regarding first aid. Nursing students and nursing practitioners should be encouraged to conduct nursing research related to occurrence of first aid measures. Nurse researchers should be motivated to conduct more studies to identify the strategies of imparting knowledge and practice of first aid measures. Nurse researchers should focus on identifying the needs of patients during emergency situations.

Nurse researchers should publish the study findings and communicate the findings regarding the first aid measures to enhance evidence based practice. Nurse researchers should encourage and conduct further researches related to creating awareness of first aid measures among people.

RECOMMENDATIONS

- The same study can be conducted in large samples to generalize the finding.
- The similar study can be conducted with control group.
- The study can be conducted in other field.
- A similar study can be conducted in school setting.

LIMITATIONS

During the period of study the investigator faced the difficulties of getting an attention from the students while teaching them and the study sample was small and sample were selected by purposive sampling method limiting the generalize ability.

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APPENDICES

APPENDIX - A

PART- I

DEMOGRAPHIC VARIABLES

A. KINDLY FURNISH THE DETAIL FOR FOLLOWING

- 1) Age in years
 - a) 17-18
 - b) 19-20
- 2) Sex
 - a) Male
 - b) Female
- 3) Department
 - a) Mechanical engineering
 - b) Civil engineering
 - c) Auto mobile engineering
 - d) Computer engineering
- 4) Place of residence
 - a) Rural
 - b) Urban
- 5) Educational qualification of parents
 - a) Illiterate
 - b) Medical professional
 - c) Non medical professional
- 6) History of any previous injuries
 - a) Fracture
 - b) Cut injury
 - c) Head injury
 - d) Other injuries
 - e) None of the above

- 7) Heath camp attended
- a) Yes
 - b) No
- 8) Duration of first aid camp attended
- a) Less than one week
 - b) More than one week
 - c) Not at all attended

PART- II
ASSESSMENT OF KNOWLEDGE REGARDING SELECTED FIRSTAID
MEASURES

A) BLEEDING

1. What is the meaning of bleeding?
 - a) Blood clot formation
 - b) Flow of blood from injured site
 - c) Blood present in sputum
2. How you will characterize the arterial bleeding?
 - a) Bright red and spurts at each contraction
 - b) Dark in colour
 - c) Red in colour
3. Which bleeding can be easily controlled?
 - a) Capillary bleeding
 - b) Venous bleeding
 - c) Arterial bleeding
4. What is the sign of bleeding?
 - a) Fainting, pulse become weak
 - b) Irritation
 - c) Cough
5. Which is the first step while caring the active bleeding wound?
 - a) Wash the site thoroughly with water
 - b) Apply direct pressure over wound
 - c) Both of the above
6. How the small cut and scrape wound should be clean?
 - a) Thoroughly clean with water and soap
 - b) Suck the blood immediately
 - c) Leave as it is

- 7) What is the initial step to control nose bleeding?
- a) Wetting the head
 - b) Covering the nose with cloth
 - c) Pinching the nostril and lean forward
- 8) What is the first aid measure for the ear bleeding?
- a) Plug the ear with piece of cloth
 - b) Cover the ear with clean material
 - c) None of the above
- 9) Which of the following act is not advisable during bleeding from eye?
- a) Removing any embedded foreign body
 - b) Rinse the eye with water
 - c) Rub the eye
- 10) What is the consequence of a severe bleeding?
- a) Fever
 - b) Fits
 - c) Anemia

B) DROWNING

- 1) What is drowning?
 - a) Falling from height
 - b) Cutting of hand
 - c) Sinking in water
- 2) What is the effect of drowning?
 - a) Airway obstruction
 - b) Fever
 - c) Cough
- 3) What is the result of drowning?
 - a) Increase the body temperature
 - b) Reduced the blood level
 - c) Reducing the body temperature
- 4) How will you check the breathing pattern of the victim?
 - a) See if the victim chest is moving
 - b) Check over the radial pulse
 - c) Ask the patient to cough
- 5) How will you deliver a continue breathing for drowning patient?
 - a) Chest compression
 - b) Mouth to mouth breathing
 - c) Elevate the head
- 6) Which item will you use to rescue the victim from drowning?
 - a) Use pole, rope
 - b) Jump into the water
 - c) Both of the above
- 7) Which position is used for victim while withdrawing from water?
 - a) Roll the patient a side
 - b) Support head and neck
 - c) Elevate the lower limb

- 8) What position would you keep the victim after rescuing from water
- a) Head lower than body
 - b) Head elevated
 - c) Sitting position
- 9) Which of the following is not a correct act for withdrawing water from victim's body?
- a) By applying chest compression
 - b) Lying on his/her stomach
 - c) Elevate the lower limb
- 10) How would you prevent the loss of heat?
- a) Provide hot water to drink
 - b) Cover in warm blanket
 - c) Rub the side of foot

C) FRACTURE

- 1) What is the meaning of fracture?
 - a) Tearing of muscle
 - b) Breaking of bone
 - c) Cracking of skin
- 2) What are the causes of fracture?
 - a) Direct or indirect fall
 - b) drowning
 - c) shock
- 3) What is the alarming sign of fracture?
 - a) Severe pain and swelling
 - b) Bleeding from site
 - c) Skin become red
- 4) How would you suspect the person has skull fracture?
 - a) Bleeding from nose
 - b) Bleeding from ear and become unconscious
 - c) Severe body pain
- 5) Which position is accurate to reduce the swelling?
 - a) Elevating without mobilizing the fracture site
 - b) Rolling the victim aside
 - c) Make the victim to sit
- 6) Which of the following sign is indicating that bandage on the limb is too tight?
 - a) Itching over the bandage site
 - b) Pale and coldness of skin below the bandage site
 - c) Slight swelling above the bandage site

- 7) Which part of the body is used to support by sling?
 - a) Arm and forearm
 - b) Nose fracture
 - c) Leg fracture
- 8) How the bleeding from fracture site can be control?
 - a) By applying pressure
 - b) Washing with water
 - c) Elevating the site
- 9) What is the use of splint?
 - a) To support the fracture part
 - b) Prevent from infection
 - c) Keep warm
- 10) How the fracture victim can be transported?
 - a) Without moving the fracture site
 - b) Applying a tight bandage
 - c) Lying on his/her abdomen

D) ELECTRICAL INJURIES

- 1) What is an electrical injury?
 - a) A cut injury
 - b) Any part of body contact with live wire
 - c) Falling down
- 2) What is the effect of electrical shock?
 - a) Stopped breathing
 - b) Headache
 - c) Chillness
- 3) What the rescuer would do to protect the victim?
 - a) Switch off the source of current
 - b) Pour water on victim
 - c) Give wood to hold
- 4) Which item is not used to cut the live wire?
 - a) Wood
 - b) rubber
 - c) Scissor and knife
- 5) What is the bad conductor of electricity?
 - a) Rubber and wood item
 - b) Water and plastic
 - c) Metal rod
- 6) What precaution should be taken by rescuer while caring the electrical injured person?
 - a) Hold the victim tightly
 - b) Don't touch the person with bare hand
 - c) Cover the person with blanket

- 7) What is the preliminary assessment for person with electrical injury?
 - a) Assess the level of responding, breathing
 - b) Pinch the person
 - c) Shake the person
- 8) What is electric burn?
 - a) Heating the tissue along length of current flow
 - b) Tearing of the skin
 - c) Bleeding
- 9) What the rescuer should not perform during electrical burn?
 - a) Apply a ice, butter over the burn area
 - b) Remove the clothing
 - c) Rinse the burn area
- 10) How to prevent electrical shock?
 - a) Provide warm drink
 - b) Cover with warm blanket
 - c) Pour water on victim

E) SHOCK

- 1) What is shock?
 - a) Respiratory system fail to deliver air to lung
 - b) The circulatory system fail to deliver blood to heart
 - c) Both a and b
- 2) What is the cause of shock?
 - a) Loss of blood & extensive injuries
 - b) Abdominal pain
 - c) Breathing difficulty
- 3) What is the major sign of shock?
 - a) Absence of pulse and respiration
 - b) Bleeding
 - c) Fracture
- 4) What you will assess when the person is in shock?
 - a) State of confusion and irritability
 - b) Violent behavior
 - c) Giddiness
- 5) What is the first intervention for shock?
 - a) Assess the pulse and blood pressure
 - b) Allow the victim to drink water
 - c) Ask the patient to stand
- 6) What position would you keep the shock victim?
 - a) Lying down with leg elevation
 - b) Turn the patient aside
 - c) Bend the leg
- 7) How will you maintain the normal blood flow for the person with shock?
 - a) Loosen any tight clothing
 - b) Give the hot water
 - c) Shake the person well

- 8) Which of the following action are not advisable for the shock patient?
- a) Support the patient
 - b) Check the breathing and pulse
 - c) Giving anything by mouth
- 9) What is the recommended position for victim with breathing difficulty during shock?
- a) Elevate the foot end
 - b) Head and shoulder should be raised
 - c) Lying the patient down
- 10) Which position should be advisable for unconscious victim with shock?
- a) Side lying position
 - b) Bend the knee
 - c) Sitting position

PART- III
ASSESSMENT OF PRACTICE REGARDING SELECTED FIRST AID
MEASURES

SKILL	YES	NO
A) BLEEDING		
1) Assess the site of bleeding		
2) Maintain the airway		
3) Control the bleeding by application of direct pressure		
4) Clean the wound with soap and water		
5) Elevation of bleeding site		
6) Pinch the nostril and lean forward for nose bleeding		
7) Cover with the clean cloth over the ear for ear bleeding		

SKILL	YES	NO
B) DROWNING		
1) Pull the victim from water using rope and pole etc		
2) Make your own position safe		
3) Keep victim's head and body properly aligned		
4) Placing hands under the victim upper arm		
5) Rotate the victim		
6) Support the victim		
7) Resuscitate the victim		

SKILL	YES	NO
C) FRACTURE		
1) Immobilize and support the fracture limb		
2) Apply the bandages over the fracture site		
3) Use the splints to immobilize the part by using hard board and piece of wood		
4) Raise the injured part after immobilizing		
5) Apply pressure along the side of fracture bone to control bleeding		
6) Check for breathing, pulse and level of consciousness		
7) Place the unconscious victim in recovery position		

SKILL	YES	NO
D) ELECTRICAL INJURIES		
1) Switch off the source of current		
2) Protect your self		
3) Don't touch the victim with bare hand		
4) Remove the tight clothing		
5) Assess the level of responding and breathing		
6) Cover the warm blanket		
7) Keep the victim in smoke free area		

SKILL	YES	NO
E) SHOCK		
1) Assess the pulse and breathing		
2) Reassure and comfort the victim		
3) The lower extremities should be elevated		
4) Loosen any tight cloths		
5) Don't move victim unnecessarily		
6) Keep the victim in recovery position		
7) Keep the victim warm		

KEYS


FIRST AID KNOWLEDGE REGARDING SELECTED FIRST AID MEASURES

Question	Answer	Question	Answer
1	b	26	b
2	a	27	a
3	a	28	a
4	a	29	a
5	b	30	a
6	a	31	b
7	c	32	a
8	b	33	a
9	c	34	c
10	c	35	a
11	a	36	b
12	a	37	a
13	c	38	a
14	a	39	a
15	b	40	b
16	a	41	b
17	b	42	a
18	b	43	a
19	a	44	a
20	b	45	a
21	b	46	a
22	a	47	a
23	a	48	c
24	b	49	b
25	a	50	a

APPENDIX - B



CERTIFICATE OF ETHICAL CLEARANCE

MADHA COLLEGE OF NURSING ETHICAL COMMITTEE	
College Campus : Saidapet Sembelgaram road Sembelgaram Chennai - 60	
Date : 15.03.2013	
<p>Chairman of Committee:</p> <p>Dr. S. Madan kumar. M.D., Dip. A & E Principal, Madha Medical College & Research Institute, Thiruvallur.</p> <p>Members:</p> <p>Dr. K. Gajendran. M.D., D.V., Principal, Madha Medical College & Research Institute, Thiruvallur.</p> <p>Dr. A. Dhanikachalam. M.S., Mch Medical Superintendent, Madha General Hospital, Madha Medical College & Research Institute, Thiruvallur.</p> <p>Dr. V. Vijai Krishna. M.P.T., Principal, Madha College of Physiotherapy, Kumbakonam.</p> <p>Dr. B. Tamilarasi, M.Sc (N), P.h.D., Principal, Madha College of Nursing, Kumbakonam.</p> <p>Mrs. Grace Samuel, M.Sc (N), Vice Principal, Madha College of Nursing, Kumbakonam.</p>	<p><u>CERTIFICATE OF ETHICAL CLEARANCE</u></p> <p>This is to certify that the research proposal, "Effectiveness of Training program on knowledge and practice regarding selected First Aid measures among non medical professional students in selected Institutions at Chennai", submitted by Ms. Tenzin Metok, student of I year M.Sc Nursing (Medical Surgical Nursing) is hereby approved and granted ethical clearance by the Ethical Committee of the institute.</p> <p>This clearance is valid for the period of 2 years.</p> <p> CHAIRMAN</p>

APPENDIX - C

LIST OF EXPERTS FOR CONTENT VALIDITY

DR. C. VIJAYA GANESH

M.D. (Consultant Physician)

Dr. Kamakshi Group of Hospitals,
24 Hours CM Hospital,
Medavakkam, Chennai – 600 100.

Mrs. JAYASRI,

R.N., R.M., M.Sc.(N).,

Principal,

Miot College of Nursing,
Mugalivakkam, Chennai- 600116

Mrs. HEMA SURESH,


R.N., R.M., M.Sc.(N).,

Vice Principal,

Meenakshi College Of Nursing,
Chikkarayapuram, Chennai-600069

CERTIFICATION FOR CONTENT VALIDITY

This is to certify that the content and the tool to the statement of the problem “**A study to assess the effectiveness of Training programme on knowledge and practice regarding selected first aid measures among non medical professional students in selected Institutions at Chennai**” prepared by **Ms. Tenzin Metok M.Sc (N) I year** student currently pursuing her M.Sc (N) degree programme for the partial fulfillment of her dissertation at **Madha College of Nursing, Kundrathur, Chennai-69** is found to be valid to the best of my knowledge.



Dr. VIJAYAGANESH, MD, Dip, Diab.
CONSULTANT PHYSICIAN / DIABETOLOGIST
(Dr. KAMAKSHI GROUP OF HOSPITALS),
24 HOURS CM HOSPITAL
2 / 170, PERUMBAKKAM ROAD,
MEDAVAKKAM, CHENNAI-600 100.

CERTIFICATION FOR CONTENT VALIDITY


This is to certify that the content and the tool to the statement of the problem
“A study to assess the effectiveness of Training program on knowledge and practice
regarding selected first Aid measures among non medical professional students in
selected Institutions at Chennai” prepared by Ms. Tenzin Metok, M.Sc (N) I year
student currently pursuing her M.Sc (N) degree programme for the partial
fulfillment of her dissertation at **Madha College of Nursing, Kunrathur,
Chennai – 69** is found to be valid to the best of my knowledge.

Jmym
4/3/2013


PRINCIPAL
MIOT COLLEGE OF NURSING
No.1/70, Mariamman Koil Street,
Mugaliyakkam, Chennai - 116

CERTIFICATION FOR CONTENT VALIDITY

This is to certify that the content and the tool to the statement of the problem
**“A study to assess the effectiveness of Training program on knowledge and practice
regarding selected first Aid measures among non medical professional students in
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student currently pursuing her M.Sc (N) degree programme for the partial
fulfillment of her dissertation at **Madha College of Nursing, Kunrathur,
Chennai – 69** is found to be valid to the best of my knowledge.


6/3/2013
VICE-PRINCIPAL
MEENAKSHI COLLEGE OF NURSING
Chikkarayapuram, Near Mangadu,
Chennai - 600 069.

APPENDIX - D



MADHA ENGINEERING COLLEGE

(A Christian Minority Institution)

(Approved by All India Council for Technical Education, New Delhi &
Govt. of Tamil Nadu & Affiliated to Anna University, Chennai)
(Accredited by National Board of Accreditation, AICTE, New Delhi)

Madha Nagar, Kundrathur, Chennai - 600 069. Phone : 044 - 2478 0732 / 34, Fax : 044 - 2478 0798
E-mail : principal@madhaengineeringcollege.com, Website : www.madhaengineeringcollege.com


Dr. R. Ponnusamy, M.Tech., Ph.D.,
Principal


PERMISSION LETTER

Date: 25.04.2013

Sub: ACADEMICS – Project in Engineering Department for one Month –First year
PG Nursing – permission – Reg.

Ms.Tenzin Metok, M.Sc (N) II year, Madha College of Nursing, Kundrathur, Chennai-600 069 is permitted to do project work (A study to asses the effectiveness of Training Programme on knowledge and practice regarding selected First Aid Measures among Non-Medical Professional students in selected Institutions at Chennai from 06.05.2013 to 06.06.2013) in Madha Engineering College, Kundrathur, Chennai-600 069.




PRINCIPAL
PRINCIPAL
MADHA ENGINEERING COLLEGE
SOMAMANGALAM ROAD
SIRUKALATHUR, KUNDRATHUR
CHENNAI-600 069.

APPENDIX - E

Letter seeking consent of the subject for the participation in the research study

I am voluntarily willing to participate in the study conducted by Ms.Tenzin Metok, on "A study to assess the effectiveness of training programme on knowledge and practice regarding selected first aid measures among non medical professional students in selected institutions at Chennai". I will also co-operate with the researcher in providing necessary information. I was explained that the information provided would be kept in confidential and used only for above mentioned study purpose.

Signature of the investigator

Signature of the student

Place: Madha Engineering College

Date: 06.05.13

Place: MADHA ENGINEERING COLLEGE

Date: 06.05.13

APPENDIX - F**CERTIFICATE FOR ENGLISH EDITING****TO WHOM SO EVER IT MAY CONCERN**

This is to certify that the dissertation "A study to assess the effectiveness of training programme on knowledge and practice regarding selected first aid measures among non medical professional students in selected institutions at Chennai.," 2013-2014, prepared by Ms. Tenzin Metok, II year M.Sc., Nursing, Student of Madha College of Nursing, Kundrathur, Chennai-69, is edited for English language appropriateness by

Name: **J. VIJAYALAKSHMI**
Pb. Asst (English)

Signature: **J. Vijay**

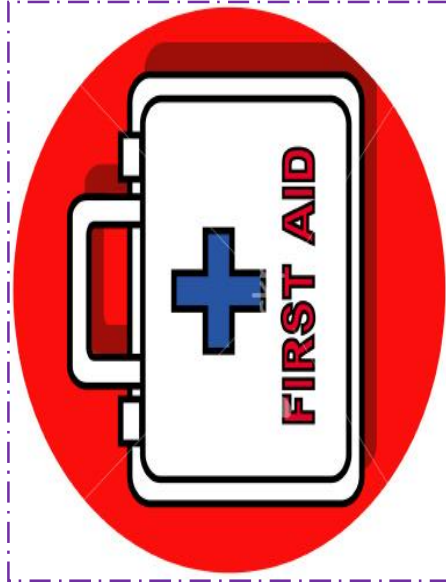
TEACHER
GOVT. HIGHER SECONDARY SCHOOL,
ANANTHARURAM-682 815. T.V.Malai, Dt.

APPENDIX - G

SKELETAL PLAN

ON

SELECTED FIRST AID MEASURES



MADHA COLLEGE OF NURSING

SKELETAL PLAN

COURSE TITLE	:	M.Sc.(NURSING)
PLACEMENT	:	II YEAR
SUBJECT	:	MEDICAL SURGICAL NURSING
TOPIC	:	SELECTED FIRST AID MEASURES
NAME OF THE PRESENTER	:	TENZIN METOK
METHOD OF TEACHING	:	LECTURE CUM DISCUSSION
A.V AIDS	:	LCD, POSTER, DEMONSTRATION, PAMPHLET

CENTRAL OBJECTIVE

At the end of the teaching the non medical professional students will gain adequate knowledge regarding the selected first aid measures and attain desirable attitude and to develop skill in performing selected first aid measures.

BEHAVIORAL OBJECTIVES

At the end of the session the non medical professional students will be able to

- a. define first aid measures
- b. state the purposes of first aid measures
- c. enlist the components of first aid measures
- d. explain the measures to control bleeding
- e. enumerate the first aid measures for drowning
- f. describe the first aid measures for fracture
- g. discuss the first aid management for electrical injuries
- h. list down the first aid management for shock

SKELETAL PLAN

S.No	Behavioral objective	Content	Teaching activity	Learning activity	A.V. Aids
1	define first aid measures	First aid measures: First aid is the initial basic treatment of an injured or ill person. First aid requires an observed first to evaluate the injured or ill person and then to intervene using a small amount of supplies.	Explaining	Listening	LCD
2	State the purposes of first aid measures	Purposes: ➤ First aid is provided to a person immediately following an accident or onset of illness to decrease complications	Explaining	Listening	LCD
3	enlist the components of first aid measures	A. Bleeding B. Drowning C. Fracture D. Electrical injuries E. Shock	Explaining	Listening	LCD
4	explain the measures to control bleeding	<u>Bleeding:</u> The release of blood from the vascular system as a result of damage to a blood vessel. <u>First aid measures for bleeding:</u> <ul style="list-style-type: none"> • Control of bleeding • Positioning 	Explaining	Listening	Demonstration

S.No	Behavioral Objective	Content	Teaching activity	Learning activity	A.V. Aids
5	enumerate the first aid measures for drowning	<p><u>Drowning:</u> Suffocation and death resulting from filling of the lungs with water or other substance.</p> <p><u>First aid measures:</u></p> <ul style="list-style-type: none"> ➤ Rescuing a drowning person ➤ Treatment for hypothermia ➤ Resuscitation 	Explaining	Listening	LCD
6	describe the first aid measures for fracture	<p><u>Fracture:</u> Fracture is a medical condition in which there is a break in the continuity of the bone.</p> <p><u>first aid measures:</u></p> <ul style="list-style-type: none"> • Stop any bleeding • Immobilize the injured area • Check blood circulation 	Explaining	Listening	Poster
7	discuss the first aid management for electrical injuries	<p><u>Electrical injuries:</u> Traumatic physical state caused by the passage of electric current through the body. It usually involves accidental contact with exposed parts of electric circuits in home appliances and domestic power supplies but may also result from lightning or contact with high-voltage wires.</p> <p><u>First aid measures:</u></p> <ul style="list-style-type: none"> ➤ Call your local emergency number ➤ If the current can't be turned off, use non-conducting objects 	Explaining	Listening	Pamphlet

S.No	Behavioral Objective	Content	Teaching activity	Learning activity	A.V. Aids
8	list down the first aid measures for shock	<p>Shock: Shock is a life-threatening condition that occurs when the body is not getting enough blood flow. This can damage multiple organs. Shock requires immediate medical treatment and can get worse very rapidly.</p> <p><u>First aid measures:</u></p> <ul style="list-style-type: none"> • Call for immediate medical help. • Check the person's airway, breathing, and circulation. • If the person is conscious and does NOT have an injury to the head, leg, neck, or spine • Place the person in the shock position. Lay the person on the back 	Explaining	Listening	Demonstration

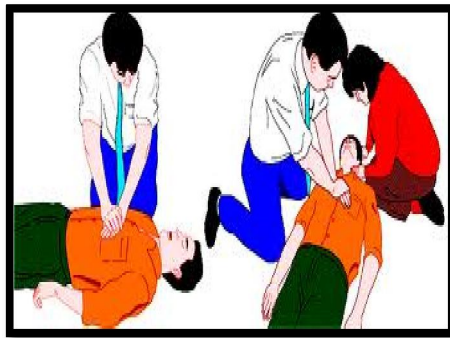
SELECTED FIRST AID MEASURES

INTRODUCTION:

Life of each and every individual is a gift from God. Living a healthy life is foremost important part of our life. This precious life can be affect by both external and internal factors which affects our individual health. We have to be very cautious about our health and the wellbeing. Injuries are most common problems faced by the adolescence. First help is the best help so First aid is the provision of initial care for an illness or injury.

DEFINITION:

- First aid is the initial basic treatment of an injured or ill person. First aid requires an observed first to evaluate the injured or ill person and then to intervene using a small amount of supplies.
- First aid is a universal term that encompasses many general concepts for rapid assessment of health crises and intervention



PURPOSES:

- To save life: aim of the medical care including first aid is to save life.
- To prevent further injury: another purpose of the first aid is to prevent the condition from worsening or danger of further injury.
- To promote recovery: first aid also involves trying to start the recovery process from the illness or injury.

FIRST AID RULES:

- ❖ Do not get excited. First check for danger and then check for responsiveness. Determine whether the victim is conscious. If the victim is conscious, ask him what happened and what is wrong now. If the victim is unconscious, proceed to check the airway, breathing and circulation.
- ❖ Do not move injured victim unless it is necessary. If necessary to move a casualty, seek assistance if possible and handle gently.
- ❖ Keeps the victim lying down with his head level with his feet while being examined.
- ❖ Keep the victim warm and comfortable. Remove enough clothing to get clear to get a clear idea to the extent of the injury. Examined the victim gently.
- ❖ Avoid allowing the victim to see his own injury. Assure him that his condition is understood and that he will receive good care.
- ❖ Do not try to give any solid or liquid substance by mouth to an unconscious victim nor to a victim who has sustained an injury.
- ❖ Do not touch open wounds or burns with fingers or other objects except when sterile compresses or bandages are not available and it is absolutely necessary to stop bleeding.
- ❖ Do not try to arouse an unconscious person.
- ❖ Seek medical attention immediately.

COMPONENTS FOR SELECTED FIRST AID MEASURES:

- ❖ Bleeding
- ❖ Drowning
- ❖ Fracture
- ❖ Electrical injuries
- ❖ Shock

1) BLEEDING:

The release of blood from the vascular system as a result of damage to a blood vessel.

Types of bleeding

- Arterial Bleeding – Blood from an open artery. The colour of the blood is bright red. The blood spurts which are synchronized with the pulse.



- Venous Bleeding – Blood from an open vein. The colour of the blood is dark red. The blood escapes in a slow steady flow.



- Capillary Hemorrhage – Blood from damage capillaries. The colour of the blood is intermediate between bright and dark red. The blood only oozes from the wound. This is the common type of hemorrhage.



First aid measures for common bleeding

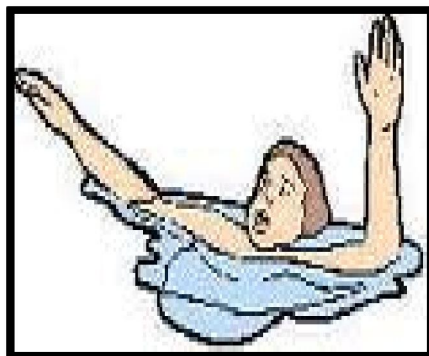
- When bleeding comes from the mouth the victim should be laid on his side or with his head tilted forward so that the blood does not drain into the mouth or nose and choke him.
- If possible, lay the victim down and elevate the injury above the level of the heart to slow or stop the flow of blood. Note that this should not be done in the event of a fracture.
- If the wound is on the side of the body, the victim should be lying down with the injury on the upper side.
- Remove the clothing or anything else that obstructs access to the injury so that a clean dressing and bandage can be applied.
- When the bleeding is severe, the bandage needs to be tight at first but when the bleeding subsides the bandage should be cut, but not removed so as to not disturb the wound and a new loose bandage should be applied over the original dressing.
- If blood soaks through the original bandage, don't remove it just add a new bandage over the original but to a larger area, and apply it more firmly than the first one. You might also need to use more layers.
- Immobilization of the injured part will also help control bleeding.

- Shock should be expected in the event there has been a lot of blood loss or the wound is severe.
- If the bleeding from nose, sit the casualty down with the head well forward and loosen any clothing around the neck and chest. Advise the victim to breath through the mouth and to pinch the soft part of the nose.
- If the bleeding from ear, place the conscious casualty in a half sitting position with the head inclined towards the injured side so that blood or fluid can drain. Cover the ear with sterile, preferably clean material.



2) DROWNING:

- According to the World Health Organization, "Drowning is the process of experiencing respiratory impairment from submersion/immersion in liquid."
- Suffocation and death resulting from filling of the lungs with water or other substance.



Complications of drowning

- Hypoxemia causing brain damage is the major complication in drowning victims who do not die.
- Direct lung tissue damage because of water aspirated into the lung can also occur and lead to pneumonia and acute respiratory distress syndrome (ARDS).
- If the drowning occurs in colder water risks include hypothermia or a drop in body temperature. (If the body temperature drops below 95F or 35C get medical attention immediately).
- Cervical spine fractures may occur in diving injuries associated with drowning.

First aid measures

➤ Reaching the victim

- a) Pull the victim from the water using rope, branch, fishing pole, stick, towel and shirt. Lie down flat on your stomach and extend your hand or leg.
- b) Throw an object that will float in water.
- c) Make sure that your own position is safe.
- d) Use boat and life jacket if available.

➤ Stabilization of the victim in the water

- a) Keeping the victim's head and body aligned, place one of your hands in the middle of victim back. Your arm directly over the victim's head.
- b) Place your other hand under the victim's upper arm, near the shoulder.
- c) Slowly and carefully, rotate the victim over in the water by lifting the shoulder up and rotating it over.
- d) Support the victim in neutral position in water start mouth to mouth ventilation.

➤ Resuscitation

- a) Quickly remove any obstruction such as sea weed, mud from the mouth start artificial ventilation immediately. It is possible to begin ventilation even in water.
- b) If within your depth use one arm to support the casualty's body and use the other hand to support the head and seal the nose while you perform mouth to mouth ventilation.
- c) If in deeper water give the occasional breath of air while towing the casualty ashore.
- d) Turn the victim face down with head to one side and arms stretched beyond his head.
- e) Use postural drainage to clear water aspiration.

3) FRACTURE:

- ❖ A Fracture is the partial or complete breakage of periosteum. (bone)
- ❖ Fracture is a medical condition in which there is a break in the continuity of the bone.



Causes of fracture

✓ Direct force

A bone can be fracture directly at the point where the force of a blow is applied.

✓ Indirect force

The bone breaks away from the spot of application of force. e.g. fracture of collarbone after on the outstretched hand.

✓ Force of muscular action

Violent contraction of group of muscles may pull pieces of bone away from the point where the muscle is attached i.e. fracture of knee cap after powerful high muscles jerk.

✓ Force of ligaments

Wrenching of a joint can cause its ligaments to pull so hard at the joint that causes fracture on one of the bones to which the ligaments are attached i.e. fracture of lower leg bone at the ankle after stumbling.

Types of fractures

A fracture is a partial or complete break in the bone. When a fracture occurs, it is classified as either open or closed:

- **Open fracture (Also called compound fracture)** - The bone exits and is visible through the skin, or a deep wound that exposes the bone through the skin.
- **Closed fracture (Also called simple fracture)** - The bone is broken but the skin is intact.

Fractures have a variety of names. Below is a listing of the common types that may occur:

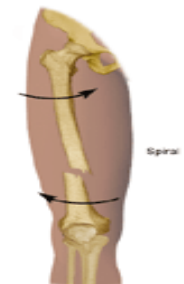
- ❖ **Greenstick**- Incomplete fracture. The broken bone is not completely separated.



- ❖ **Transverse**- The break is in a straight line across the bone.



- ❖ **Spiral**- The break spirals around the bone; common in a twisting injury.



- ❖ **Oblique**- Diagonal break across the bone.



Signs and symptoms

- Pain at or near the site of injury, which increases by movement.
- Difficulty in movement.
- Swelling of the area and discolouration.
- Deformity.
- Tenderness.
- Coarse bony grating (crepitus) may be heard.
- Signs of shock.

Aims of first aid

- 1) To prevent further damage
- 2) To reduce pain
- 3) To make patient comfortable
- 4) To get medical aid at earlier

Treatment

- Treat difficulty in breathing, bleeding and unconsciousness before the fracture.
- Treat all fracture in the position in which the casualty is found, unless there is immediate danger to life or the casualty will expose to bad weather.
- Immobilize and support the fracture limb using bandages or splint. This should be done on both sides of fracture, above and below the fracture site.

a) Using bandages

Usually it is enough to use the other (uninjured) limb or the body of the patient as the splint. The upper limb can be supported by the body, the lower limb by the other limb.

- 1) Do not apply bandages over the area of fracture.
- 2) The bandaging should be fairly firm so that there is no movement of the fractured ends, but not too tight in which case the circulation of blood to the area will be stopped. If there is further swelling of the injured area, the bandage is too tight therefore loosen the bandages slightly.
- 3) Always place padding material between the ankles and knees and other hollows, if they have to be tied together, so that when limbs are bound together they are together so that when limbs are bound together they are comfortable and steady.

b) Using splints

- 1) A splint is rigid pieces of wood or plastic material or metal applied to a fractured limb, to support it and to prevent movement of the broken bone.
- 2) Reasonably wide splint are better than narrow ones.
- 3) They should be long enough so that the joints above or below the fractured bone can be made immobile.
- 4) The splints should be well padded with cotton or cloth so as to fit softly and snugly on the injured limb.
- 5) Splints are best applied over the clothing.
- 6) In an emergency splint can be improvised with walking stick, an umbrella, a piece of wood, a book or even firmly folded newspaper.
- 7) Raise the injured part after immobilizing it to minimize discomfort and swelling rolled up blankets can be used.

4) ELECTRICAL INJURIES:

Traumatic physical state caused by the passage of electric current through the body. It usually involves accidental contact with exposed parts of electric circuits in home appliances and domestic power supplies but may also result from lightning or contact with high voltage wires.



Electrical current can cause injury in three ways

- ❖ Cardiac arrest due to the electrical effects on the heart.
- ❖ Muscle, nerve and tissue destruction from a current passing through the body.
- ❖ Thermal burn from contact with the electrical sources.

Causes

- 1) Accidental contact with exposed parts of electrical appliance or wiring.
- 2) Flashing of electric arcs from high voltage power lines.
- 3) Lightning.
- 4) Machinery or occupational related exposures.
- 5) Young children biting or chewing on electrical cords or poking metal object into an electrical outlet.

Symptoms

Symptoms depends on many things, including the types and strength of voltage, how long you were in contact with the electricity, how it moved through your body and your overall health.

Symptoms includes

- ✓ Changes in alertness
- ✓ Broken bones
- ✓ Heart attack
- ✓ Head ache
- ✓ Problem with swallowing, vision or hearing
- ✓ Irregular heartbeat
- ✓ Muscle spasms and pain
- ✓ Breathing problems
- ✓ Seizure
- ✓ Skin burn

First Aid

- If you can so safely, turn off the electrical current, unplug the cord, remove the fuse from the fuse box or turn off the circuit breakers. Simply turning off an appliance may not stop the flow of electricity. Don not attempt to rescue a person near active high voltage lines.
- Call your local emergency number.
- If the current can't be turned off, use a non conducting object such as a broom, chair, rug or rubber doormat to push the person away from the sources of the

current. Do not use a wet or metal object. If possible stand on something dry and that doesn't conduct electricity such as a rubber mat or folded newspaper.

- Once the person is away from the sources of electricity, check the person's airway, breathing and pulse. If either has stopped or seems dangerously slow or shallow, start first aid.
- If the person has a burn, remove any clothing that comes off easily and rinse the burned area in cool running water until the pain subside, give first aid for burns.
- If the person is faint, pale or shows other signs of shock, lay him or her down with the head slightly lower than trunk of the body and the legs elevated and cover him or her with a warm blanket or a coat.
- Stay with the person until medical help arrives.
- Electrical injury is frequently associated with explosions or fall that can cause additional severe injuries. Do not move the person's head or neck if the spine may be injured.

DO NOT

Stay at least 20 feet away from a person who is being electrocuted by high voltage electrical current until the power is turned off.

- 1) Do not touch the person with your bare hands if they are still in contact with the source of electricity.
- 2) Do not apply ice, butter, ointment, medications, fluffy cotton dressing or adhesive bandages to a burn.
- 3) Do not remove dead skin or break blisters if the person has been burned.
- 4) After the power is shut off, do not move the person unless there is a risk of fire or explosion.

5) SHOCK:

Shock is a life threatening condition that occurs when the body is not getting enough blood flow. This can damage multiple organs. Shock requires immediate medical treatment and can get worse very rapidly.

Causes

Shock can be caused by any condition that reduces blood flow, including:

- Heart problems (such as heart attack or heart failure)
- Low blood volume (as with heavy bleeding or dehydration)
- Changes in blood vessels (as with infection or severe allergic reactions)
- Certain medications that significantly reduce heart function or blood pressure

Shock is often associated with heavy external or internal bleeding from a serious injury. Spinal injuries can also cause shock.

Symptoms

A person in shock has extremely low blood pressure. Depending on the specific cause and type of shock, symptoms will include one or more of the following:

- Anxiety or agitation/restlessness
- Bluish lips and fingernails
- Chest pain
- Confusion
- Dizziness, lightheadedness or faintness
- Pale, cool, clammy skin
- Low or no urine output
- Profuse sweating, moist skin
- Rapid but weak pulse
- Shallow breathing
- Unconsciousness

First Aid

- Call for immediate medical help.
- Check the person's airway, breathing, and circulation. If necessary, begin rescue breathing and cardiopulmonary resuscitation.
- Even if the person is able to breathe on his or her own, continue to check rate of breathing at least every 5 minutes until help arrives.
- If the person is conscious and does not have an injury to the head, leg, neck, or spine, place the person in the shock position. Lay the person on the back and elevate the legs about 12 inches. Do not elevate the head. If raising the legs will cause pain or potential harm, leave the person lying flat.
- Give appropriate first aid for any wounds, injuries, or illnesses.
- Keep the person warm and comfortable. Loosen tight clothing.

IF THE PERSON VOMITS OR DROOLS

- Turn the head to one side so he or she will not choke. Do this as long as there is no suspicion of spinal injury.
- If a spinal injury is suspected, "log roll" him or her instead. Keep the person's head, neck, and back in line, and roll him or her as a unit.

DO NOT

- Do not give the person anything by mouth, including anything to eat or drink.
- Do not move the person with a known or suspected spinal injury.
- Do not wait for milder shock symptoms to worsen before calling for emergency medical help.

